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NORTH CAROLINA

MEDICAL JOURNAL.

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Original Communications.

A REPLY TO DR. W. T. HOWARD'S REVIEW OF THE "ESSAY ON MALARIAL PNEUMONIA," WHICH APPEARED IN THE TRANSACTIONS OF THE MEDICAL SOCIETY OF N. CAROLINA.

BY OTIS FREDERIC MANSON, M. D. MEMBER OF THE MED. SO. OF N. C.

At a meeting of the State Medical Society of North Carolina, held at Edenton in April, 1857, we had the honor of laying before that body, a brief sketch of the form of Pneumonia, usually observed in our field of labor, with a few observations on its physical signs, pathology, diagnosis, and the mode of treatment which we had found most successful. As the profession of this State have already been apprised, this essay has been made the subject of a prolonged and searching review by Dr. W. T. Howard, of Warrenton, a paper not only unparalleled in the annals of medical criticism for its unprecedented length, but also as being evidently the result of a degree of labor immensely disproportionate to the fugitive production selected as its text.

Nor this alone. Were this so styled "Review" only objectionable from its tedious and unnecessary prolixity or as being the vehicle of adverse views, we should have pass-

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ed it by in silence, but its author, in order to carry his point, has not only taken every advantage which ingenuity could invent, or reckless mutilation of recorded authorities afford, he has not only placed the most erroneous and indefensible construction on our language, but his production is marred by a tone of arrogant pretension and studied depreciation throughout, and ridicule and satire have been called in aid when misrepresentation and contrivance failed.

We therefore feel impelled to enter into the contest which our critic so eagerly and ardently has sought. Deeply impressed with the truth and importance of the views which we have announced, we should not only be recreant to duty if we failed to use our best endeavors to sustain them, but unworthy of our mission if we succumbed without an effort to the assaults of self-constituted critics and flatulent reviewers.

THE ALLEGED MOTIVES OE THE "REVIEWER."

As our critic justly foresaw that his extraordinary performance would naturally lead to an inquiry into the reasons for such a vast expenditure of time and toil, he has therefore doubtless felt it his duty to offer an apologetic declaration of the motives which have led him to engage in the task. We beg leave to examine these *seriatim.*

1st. That we have assserted "that there exists among the medical men of the South, great confusion of ideas, and consequently great ignorance and want of skill in regard to the diagnosis and treatment of the several forms of Pneumonia," and that therefore, in order to combat these "charges of so grave a character against the practitioners of the South," that it is demanded of those who do not consider themselves amenable to them to notice them, and he therefore has chosen as an arena, in which to enter himself as the champion of southern medicine, "the State Medical Society" to whom this (my) Essay was first submitted.

Certainly every man ought to be best acquainted with

his own motives, his own incentives to action, but it is not the less true that many are constantly mistaking them and this doubtless has been the case with our bold and disinterested defender of southern physicians, who alone of all the sons of our sunny clime has felt himself specially called to vindicate their skill from aspersion. That our critic is in error in regard to this being one of his motives, we shall easily prove and the only witness shall be himself. If we were to admit, which we do not, that we have assailed, as asserted by our reviewer, the talents and skill of the great body of the physicians of the south, we would hold that our critic has completely incapacitated himself for becoming their vindicator, or for urging this as an objection to our essay, from the simple fact that he has made *positive* and *direct charges* of the identical character which he declares we have implied, and lo! the proof. Let the reader turn to his review (N. C. Med. Journal, Vol. 2, No. 1, page 324) and he will perceive these words written by Dr. Howard himself:

"It may be remarked . . . . . that there is not perhaps any disease so actively treated in the south as pneumonia. The vast majority of cases are pretty heavily dosed with calomel and tartar emetic—a combination, as we shall hereafter see, particularly apt to light up gastro-intestinal irritation and which sometimes proceeds to a most destructive inflammation."

Now unless our reviewer is prepared to maintain that the vast majority of cases of pneumonia in the south are pretty heavily dosed by a minority of southern practitioners, he here expressly charges them with the gravest general and fatal mal-practice. We therefore declare it as our opinion, that our reviewer must be in error in supposing that this was one of his motives for engaging in his task, viz: to defend the skill and talents of his southern brethren.

Before we proceed further, let us compare these wholesale accusations of our critic with those, which, according to him, we have stated "expressly or by necessary implication;" let us like him, insert the passages from which he has deduced his conclusions as to our meaning, and endeav-

or to ascertain if he has not done us some of that "possible injustice" which he would appear so delicately fearful of committing:

'It cannot be doubted but that great confusion exists at present in regard to the various forms of pneumonia. It perhaps has occurred to every *experienced physician*, to have seen them all included in the same category, and treated in the same manner; errors to be deeply deplored, attended as they often are by the most disastrous consequences. Inflammation of the lungs, like inflammation of any other structure, may be altogether different in its nature, complications and terminations; and though technically included under the same term, its various forms require as totally opposite modes of management as the most dissimilar diseases of organs the most remote in situation and unlike in function. One practitioner, with an eye solely fixed on the long affection resorts to the active antiphlogistics of sanguineous depletion and antimony, another, warned by the results of such means, adopts the expectant or stimulant plan; whilst a third, led on by that spirit of generalization which has has been the bane of our science, appeals to Cinchona in all cases, and under all circumstances.

Who is to blame? Assuredly we of the South! Studying the works almost solely of British and continental writers, which, however perfect in all points for those regions, are sadly deficient for us, we force the forms of our diseases to bend to their descriptions, and blindly follow a treatment intended for varieties of disease we never witnessed. Consummate and fatal folly! Yet, year passes year only to note its repetition, whilst we, reclining in inglorious ease or censurable indifference, view the perpetuation of the error, knowing too that hundreds are yearly added to our ranks who will have to pass through the same trials and difficulties, and experience the same disasters we encountered, before they will be enabled to diagnose correctly, or treat successfully any diseases, save those common to all countries, without a warning, a sign or explanation from us to guide the neophyte through the labyrinth before him. Oh! awake my friends! here is an open, unexplored path to usefulness and fame, an object to excite ambition, commendable in its pursuit, and glorious in its attainment; the secret of whose possession is comprised in three words—Observe! Compare! Record.

The existence of a form of pneumonia, having some undefined connection with periodical fever, has long been known and noticed; but unfortunately for the student of the present day, the affection has not attracted the attention of recent investigators, and is only cursorily and imperfectly noticed by any of the modern standard authorities.

In my opinion the phase of disease whose delineation is now attempted,

is the form of pneumonia generally seen by southern observers; that its peculiarities are often unrecognized, being often confounded with simple typhoid and other varieties of pulmonic lesion. Not only this, but the assertion is here made that under proper management, this disease, although of decided fatal tendencies, is more under the control of remedial agents than any of the so-called phlegmasiæ. If these declarations are true, how important is it that its features should be familiarly known, in order that it may not be confounded with diseases chiefly affecting the same organs, but so unlike in character and nature.'

Now from these extracts our critic derives the following inferences as to our meaning. "That it states expressly, or by necessary implication, that there exists among the medical men of the south great confusion of ideas, and consequently great ignorance and want of skill among them in regard to the diagnosis and treatment of the several forms of pneumonia." We beg the reader to peruse carefully these extracts, and having done so we fear not but that his decision will acquit us of having unjustly assailed the knowledge and skill of our southern brethren, *en masse*, as interpreted by our critic, and that he will decide that it is only by an illiberal construction of our language that it can be made so to appear. The sentences are not so carefully worded as they assuredly would have been had we dreamed that such an interpretation would have been given them. Taken as a whole, however, without emphasizing any word, as our reviewer has thought proper to do, it seems to us clear that the imputations contained in them were clearly intended to apply to the "neophyte," or inexperienced practitioner, thus designated, and that the experienced men of the profession were censurable for withholding a warning or sign of explanation to guide him through the labyrinth before him. How would it be possible for us to warn or guide him if all were ignorant or unskilful; not only this, but the paragraph expressly states that we had *passed* through these trials and difficulties, and already *encountered* disasters before we were *enabled* to diagnose correctly, or treat successfully, our peculiar forms of disease. We regret that any one, even our ungenerous critic should have deemed us ca-

pable of such a wholesale disparagement of the experienced practitioners of the south. On the contrary, we believe that our art is not more successfully practised in any part of the globe than by the physicians of the southern States and that no men deserve more credit for so doing; for we repeat the declaration that to attain this skill they owe but little to "the modern standard authorities," so far as our peculiar forms of disease are concerned, and that if they have become skilful in the diagnosis or treatment of the form of Pneumonia, which is the subject of this discussion, that it has been either in consequence of the teachings of our experienced physicians, or after encountering untold dangers and disasters. That there is great confusion in regard to the pathology and diagnosis of this malady, we do not hesitate to repeat, and if of this further proof were wanting, the present controversy would afford a striking illustration of its truth. Alas! unfortunately, this "confusion" is not confined to this disease, nor yet bounded by the limits of our southern borders. Our science now presents itself as a young giant, who having rent asunder the shackles which have too long enchained his limbs and embarrassed his progress, is yet undecided whither to bend his steps. The system based upon Pathological Anatomy, which so long assumed the title of "*Orthodox Medicine*," and which, to use the language of Van Helmont* "like a bloody Moloch, sat President in the chairs of Medicine," has vanished at the apparition of the New Medical Constitution. The illusion of the chemist, that the living organism might be regarded as a laboratory whose operations were to be explained and whose derangements were to be remedied by the principles which presided over the reactions of dead medicine, and the thousand other fallacies which in turn have dazzled to delude, and betrayed to destroy, like *ignes fatui* have "paled their ineffectual fires" before the dawning light of rational induction.

*Ortus Medicinæ (Pleura Furens) p. 397. Amsterodami, 1648.

2nd. The next motive assigned by our reviewer for his ponderous *critique* is, that we having erred in our views in regard to the Physical signs, "though he does not assert for himself any extraordinary proficiency in the art" of physical diagnosis, yet "it was alike natural and proper that he should 'closely scrutinize the foundations of our opinions' and 'rigidly compare them' with the authors we have cited," etc.

If we turn to the pages of those who have written upon the subject of physical signs of pneumonia, we cannot fail to perceive the vast discrepancy between the views of those who have treated upon the subject *ex cathedra.* Certainly therefore, an opinion modestly expressed on the subject might have been allowed to pass without receiving any very "rigid or extended examination, especially as we had promptly disclaimed at the onset, the slightest claim to expertness on this branch of the subject. If we were in error no amount of learning or logic was necessary to convince the reader that it proceeded from ignorance, for the simple reason that the experience of the reader himself could alone decide the question really at issue, viz: Whether the physical signs of the so-called Idiopathic Pneumonia were present or absent in the malarial form—a variety whose auscultatory phenomena no authoritative teachers of physical diagnosis have ever yet made the subject of special study, and of which very few of them have apparently observed a single example. We think, therefore, that our critic must be mistaken in respect of this being one of his motives for reviewing. This is hardly a reasonable or legitimate apology for the tedious infliction which he has bestowed upon the time and patience of his reader.

3rd. Another motive assigned by our reviewer for his elaborate effort is, that we have not correctly described the symptoms of the disease.

As we shall presently see that in many of the principal points concerning the symptomatology of this affection, our critic coincides with us, and that the most important

of those which he rejects in the first part of his "Review," he becomes wiser and accepts towards its conclusion, thus evincing either the beneficial effects of our essay upon his views or the results of the additional experience acquired during the composition of his "protracted paper," we are forced to disagree with him in regard to the real existence of this motive and we must therefore proceed to search through his two hundred and forty pages for another.

4th. Our reviewer now perceives that he has engaged in his task, because we have committed many "grave errors," in regard to the pathology of this disease, and he therefore has "canvassed the essay frankly and freely in the spirit that even Homer should have waked up where he nods." But these cannot be his motives or his "spirit." We say it in all frankness: the gentleman must be mistaken in regard to his motives on this as he clearly is on the points already enumerated. If the views which we have adopted of the pathology of the disease, demanded such an eternal examination as he has bestowed upon this essay, they certainly ought to have elicited a passing notice from him or somebody else long before; for it happens that the doctrines which we have expressed, as we shall soon see, are identical with those held by some of the distinguished authorities, which he most approvingly quotes in other connections, but whose chapters in the same volumes, by a singular coincidence he has entirely ignored, when they directly sustained us and could not aid him, in his strictures, so "frankly and freely" bestowed. This could not then, oh! most impartial, ingenious and tender of critics have been thy motive, these "grave errors" were not as you were or ought to have been aware, mine, but those of thy and my superiors.

Finally, having failed to discover the motive which impelled our reviewer to engage in his interminable assaults upon us, let us turn at last to our Therapeutics. Surely here we must find it as here only could truly be committed the "grave errors" with which we are charged. But no! After having expended all the amunition of his learning, with

sarcasm and logic; after having, as he very properly and forcibly expresses himself, "spread out" his "protracted paper to its present extended length," which he informs us was "written by snatches, under the *pressure of arduous professional engagements*, and mostly at night when enervated by fatigue and suffering from impaired health, and all this for the kindly purpose of preventing his brother "Homer from nodding." *He winds up by endorsing our "treatment."**

Parturiunt montes; nascitur ridiculus mus! Blind as we have been that we could not truly discern the "symptoms" of the disease; deaf as we have been that we only but rarely could hear "*le rale crepitant;*" so devoid of discrimination that we had failed in its "diagnosis," and so gravely in error that we could not comprehend his or our own "unsound pathology," yet "when Dr. Manson comes to apply his "therapeutics," *it is really pleasing* to witness how the sagacity of the practical physician *shines* forth," that the *indications* are clearly stated, the means advised highly judicious, and that he "takes pleasure in commending them to the *approval* of the profession."

And has it come to this, that for twelve long months our humble contribution—a brief sketch entering into the transactions of a medical society should be held up to the public condemnation, that its most trivial errors should be criticised, its views distorted, and that it should be made the subject of satire and the butt of untimely jest because it was "unsound in its pathology. Surely with a generous critic "the sagacity of the practical physician," might have pleaded in extenuation of the errors of the pathologist, surely with such a one the practice "so highly judicious," that he even could not refrain from "commending" it, might have placed as

*It will be seen however, hereafter, that this is only a specimen of "damning with faint praise," for although our critic speaks in these terms of general commendation of the treatment, his nature soon breaks out in a quarrel with the details, and that which he approves in the abstract he rejects in the concrete.

an offset against our theoretical heresies, the "*clear*" statement of "curative *indications*" have compensated for much that was doubtful or obscure. On the basis, therefore, of this examination of what may be termed the proximate cause of this controversy, the reader will doubtless unite with us in the opinion that our critic has not given a satisfactory account of the motives which led him to engage in it. What then were those motives? We will give our opinion. Bearing in mind the time and labor expended in this production, the minute care with which he has evidently studied every line and word of our essay, the ungenerous constructions which he has placed on its import, the virulence with which he has assailed the most unimportant points, and the eagerness with which he has exposed the most trivial errors, it seems to us perfectly transparent that he has adopted such sinister means to attain a sinister end, and that we shall characterize as an attempted elevation of the reviewer at an injurious expense of the reviewed. His paper bears the most satisfactory evidence on its face that truth, scientific truth, the only legitimate object of scientific controversy has not entered into his design.

We have no disposition to prove ourselves a martyr. Confident of the correctness and value of our views we shall endeavor to support them to the extent of our humble ability, and if in pursuance of this object we shall necessarily expose the short-comings of our critic, be his alone the blame. If he has ventured on the treacherous sea of criticism in a bark too frail to outride the storm, let him beware of the consequences of heedless presumption and reckless daring.

NAME OF THE DISEASE.

Our reviewer not confining himself to the discussion of facts or doctrines, has endeavored to bring our essay into discredit, by carping at the name which we have *chosen* to designate the disease under consideration. Thus he says *

*See Dr. Howard's Review, (N. C. Medical Journal,) Vol. 2, pp. 307, 325, 527, 553: Vol. 3, pp. 264, 266.

this disease is "designated" by us "as Malarial Pneumonia," refers to it as our "Malarial Pneumonia," and characterizes it as "Dr. Manson's Malarial Pneumonia." That an humble member of the profession as ourselves should take the liberty of reforming the nomenclature of the science would be open to objection, and furnish a proper occasion for cavil, we cheerfully admit, but we deny that we have attempted any such innovation on the title of this disease; and what is more to the point, we assert that our reviewer ought to have known better when he charged us with such an intention, and of which facts we furnish the proofs:

1. The reader of Dr. Howard's review who cannot but recollect how often the justly admired work * of the late Dr. Drake has been quoted therein, will learn with surprise that that distinguished author himself employed the same designation years before the appearance of our essay, and obviously for analogous reasons. If the reader will be kind enough to turn to the volume, he will observe the term Malarial Pneumonia twice in the Index, and again that of Malarial Pneumonitis in the body of the work on the second page of his chapter on Bilious Pneumonitis, the identical page from which Dr. Howard quotes in his review.

2. Nor can our critic offer in excuse that he did not perceive that Dr. Drake had indicated this term; for if the reader will again turn to vol. 3, p. 245-6, of the N. C. Med. Journal, being the 231st and 232d pages of Dr. Howard's Review, he will perceive this term quoted immediately from Dr. Drake's work, "The late lamented and eminent Professor Drake, whose great work is said to have no parallel of its kind in medical literature before proceeding to speak of the *methodus medendi* demanded in Bilious or Malarial Pneumonitis states," etc.

The only apology we can offer for this misstatement of our reviewer of our having bestowed a name on this disease is

*A Systematic Treatise on the Principal Diseases of the Interior Valley of North America, by Daniel Drake, M. D. Second Series, Philadelphia, 1854.

that having spun out his production to such an interminable length he forgot in the latter part of his paper the blunders which he had committed in the first. We must therefore despoil our reviewer of the petty advantage he supposed he had gained in sneering at a name which was not invented but merely selected by us as the most appropriate we could find.

In regard to the name of this disease there is perhaps no scourge to which humanity is liable that can boast of more numerous designations. Thus by Triller,[1] Rush[2] and others more recently, it was styled *Bilious Pleurisy*, and the term Bilious Pneumonia has been employed by Stoll,[3] Chomel,[4] Andral,[5] Elberle,[6] Wood,[7] and others. By Quarin[8] it was entitled *Peripneumonia Putrida*. Sauvages,[9] denominated it Synoche Pleuretique; Larcone,[10] *Fievre periodique pulmonaire;* Laennec[11] Fievre remittente pernicieuse peripneumonique; Jean-Pierre Frank,[12] *Peripneumonia Periodique;* Chapman,[13] *Congestive Pneumonia;* Grisolle[14] and Valleix,[15] *Pneumonie intermittente et remittente et Pneumonie bilieuse;* Alibert,[16] *Fievre Pernicieuse Intermittente Peripneumonique;* Mail-

1 Traite de la Pleuresie, Traduit du laten, Par MeeMahot, p 165, Paris 1815.

2 Rush's Sydenham, p. 165, Phila., 1809

3 Medicine Pratique, (1re part p. 8) traduet par Mahon, Paris, 1809.

4 Dictionnaire de medicine, (in 21 vols.) Tome 17, p. 225, Paris, 1827.

5 Clinique Medical, Tome, 3me, p. 254. Quatrieme ed. Paris, 1840.

6 Practice of Medicine, vol. 1, p. 308 fourth ed. Phila., 1838.

7 Practice of Medicine, vol. 2, p, 16, third ed. Phila., 1852.

8 De Febribus et Inflam. comment, p. 326, Vienna, 1781.

9 Nosologie Methodique, Tome 1, p. 399, A'Paris, 1771.

10 Histoire Raisonnee des maladies observees a Naples, traduit, par F. Ph. Bellay D. M. Tome 1, p 213, Paris, 1804.

11 Traite de l'Auscultation' mediate, 3me ed. Tome 1ev. Paris, 1831.

12 Traite de Medicine Pratique, traduit du latin, Par J. M. C. Goudareau, Tome 1, p. 176, Paris, 1842.

13 Benedict's Compendium of Chapman's Lectures, p. 217, Phila. 1846.

14 Traite Pratique de la Pneumonie, pp. 398. 425. Paris. 1841

15 Guide du Medicine Practicien, 3me ed. Tome 1, pp. 437, Paris, 1853.

16 Traite des Fievres Pernicieuses Int. p. 57, Paris, 1820.

lot,[1] *Fievre Pneumonique*, and lately, it has been distinguished by Morehead,[2] as *Febrile Pneumonia;* whilst in popular language it has been variously termed, *Lung Fever*, *Head Plurisy*, *Cold Plague*, Winter Fever, etc.

Among the various appellations bestowed upon this malady, that of Bilious Pneumonia, which apparently is most acceptable with American authors, has appeared to us the most objectionable. The functional disturbance of the liver, from whence the prenomen *Bilious* was derived, although frequently and prominently observed in the disease, is yet too often absent to render it a very reliable guide in diagnosis, or to entitle it to the privilege of conferring a name on the disease. In the gravest cases that we have observed, it has occurred that the so-called bilious symptoms were entirely wanting, and in many cases, the evidences of hepatic implication appear too late to assist in framing that prompt decision so necessary in a disease of such rapid progress and fatal proclivity. We know that it was from the undue stress laid upon these bilious symptoms by the most popular writers, that we were led in our early career into the grievous mistake of confounding this affection with the Idiopathic Pneumonia of authors. We believe at this day, from our experience and consultation with younger members of the profession, that from the same cause this error is still often committed, and we therefore ardently hope that this term, the offspring of a vicious and erroneous pathology, may soon be forever erased from our nosology.

On the other hand, the term "*Malarial Pneumonia*," indicated by one of the most distinguished authorities in American medicine, can lead to no error, either in theory, diagnosis or practice, and is eminently suggestive of the true nature of the affection, whether the pathology adhered

1 Traite des Fievres. p. 41, Paris, 1836.

2 Clinical Researches on Diseases in India, p. 509, second ed. London, 1860.

to by our reviewer or ourselves be adopted. It is clearly expressive of the most important elements in the etiology of the disorder, and denotes the important organs which are the seat of inordinate vascular determination. From these considerations, and in honor of the memory of the illustrious Drake, we respectfully propose this name to the profession. In any event, until a more suitable and comprehensive designation is supplied it at least shall continue to be employed by us.

THE "NOTORIOUS PRODUCTION."

"It is well known," says our critic, "that the production [*our essay*] obtained a very early and wide *notoriety*. Indeed, it was transferred from the advance proof sheets of the Transactions of the Medical Society of this State, to the pages of the Virginia Medical Journal, and appeared there simultaneously with its insertion in the New Orleans Medical News and Hospital Gazette."

In justice to ourselves a brief explanation is here rendered necessary. It is true that the essay *was* transferred to the pages of the Virginia Medical Journal, and the members of the Society present at the meeting at Edenton, will doubtless remember the reason. On that occasion we stated that the article was intended as one of a series of "Sketches of the Endemic Diseases of the Roanoke Valley," then in course of publication in the Virginia Journal, but that as so few contributions had been offered at that meeting, that, in order that the transactions might form a pamphlet of respectable dimensions, we would present this paper for insertion if the Society should deem it worthy of acceptance; whereupon, it was moved by our esteemed friend Dr. Satchwell, that we should be "allowed to publish the essay in the Virginia Medical Journal after it had appeared in the Transactions of this Society."*

*Transactions of the eighth annual meeting of the Medical Society of the State of North Carolina, held at Edenton April 1857, page 14.

Such is the history of the "transfer" of this paper to the pages of the Virginia Journal and the only part which we have taken to procure for it the "rapid and extensive circulation," mentioned by our reviewer.

Our critic is however, so avaricious of praise that he cannot even give a correct account of the reception of our humble essay. It is strange that one so fastidiously hypercritical that he cannot permit a trivial typographical error to escape him, could not find in his vocabulary a word more appropriate and suggestive of the facts than that of "*Notoriety*," to characterize the estimation with which our essay was received. As he possesses such talents for verbal criticism, let us exercise them a moment and inquire what is the common acceptation of the word Notoriety? and as he receives nothing unsupported by authority, let us refer to the highest on the subject by quoting the definition of Webster:*

NOTORIETY, n. (Fr. *notoriete* from *notoire*. See *Notorious*).

1. Exposure to the public knowledge: the state of being publicly or generally known as the notoriety of a *crime*..
2. Public knowledge.

NOTORIOUS, a. (It, and Sp: *notorio*, etc.)

1. Publicly known, manifest to the world; evident; *usually* known to *disadvantage; hence almost always used in an ill sense* as a notorious *thief*, a notorious *crime*, etc.
2. In a good sense.

Or if this should be unsatisfactory to our critic, let us refer to Crabb's classical work on English Synonymes:

"Notorious is *never* used but in a *bad* sense. Men may be noted for their talents or their eccentricities, they are *notorious* only for their *vices*. * * *Notorious* characters are *always shunned*. 'What principles of ordinary prudence can warrant a man to trust a *notorious cheat*'—*South*."

It will be seen therefore, that our reviewer, with an apparent determination that no approval of our essay should find any circulation through the medium of his *critique*, could find no other than this offensive and opprobrious epithet which according to a high authority, is *almost always*

* American Dictionary of the English Language. p. 758.

used in an ill sense, and as the *usual* signification of vice and criminality, and which, according to another, is *never* used but in a *bad* sense, to express the reception which our paper met at the hands of the profession. Although the term is in rare instances, employed in a good sense, yet when we bear in mind that our essay has only been reviewed by our critic to be censured, and that its facts, opinions and doctrines are only noticed to be condemned, the inference would be irresistible with the reader that it had met with the same obloquy to which he has endeavored to consign it. Let us however, ascertain what are the facts, whose mention he has so carefully avoided. Let us see if we have not been dealt with more generously and charitably if not so "frankly and freely" as by our *confrere* and neighbor—Dr. Howard.

We know we incur the liability of being charged by some with heralding our own praises in re-publishing the subjoined flattering notices of our little paper, but we maintain that in a controversy like this, in which every effort has been made by our opponent to bring it into contempt that it is a legitimate mode of defense, to inform the reader of those commendations which it has received from more competent and disinterested sources, and which we proceed to give:

EXTRACT FROM A REVIEW OF THE SOCIETY'S TRANSACTIONS, FROM THE PEN OF THE ACCOMPLISHED AUTHOR, CRITIC AND SCHOLAR, DR. D. F. CONDIE, IN THE AMERICAN JOURNAL OF MEDICAL SCIENCES, OF OCT. 1857, p. 446.

'The most extended and elaborate report in these "Transactions," is that of Dr. Otis F. Manson on Malarial Pneumonia. The reporter examines very minutely the general course and progress ef pneumonia as it usually occurs in malarious districts, its physical signs and the physical changes that occur in the disease, the diagnosis between it and other forms of pneumonia, its cause and nature and the treatment best adapted to conduct it to a favorable termination. The report is one we should like to dwell upon at some length. The author has emitted opinions which are eminently suggestive, to say the least of them, and certainly deserving of a close and candid examination. The correctness of some

of his conclusions may admit of question, still as a *very masterly history of pneumonia* in the form under which it usually presents itself in those whose systems are laboring under the influence of malarial poison *it forms certainly a valuable contribution to pathology.*"

FROM THE NEW ORLEANS MEDICAL NEWS AND HOSPITAL GAZETTE OF SEPT. 1857.

"SPECIAL SELECTIONS."

"The following article on Pneumonia, *as it appears amongst us at the South must prove acceptable to all our readers.*

Practitioners of medicine here are beginning to be aroused to the truth of the proposition, that we have peculiarties of disease in our climate, and that the therapeutics of the North or of transatlantic regions cannot be considered as applicable to the same: and if we could only induce our brethren to follow the bright example of Dr. Manson, and record faithfully their observations the most skeptical would soon be forced to yield acquiescence to the doctrine of educating southern physicians at home.—EDITORS."

Here we are honored by the Editors by copying the article entire in the same number. These were the only public notices taken of our essay at the period when Dr. Howard's Review was penned of which we are cognizant. Had it met with any unfavorable reception it doubtless would have been noticed by our reviewer. The reader may now judge if he has correctly stigmatized it as a *notorious* production.

SYMPTOMS OF MALARIAL PNEUMONIA.

Our reviewer next proceeds to examine the features of the disease "as portrayed by us," and to the reader who has not perused my paper, it would appear from the separate examination to which he has submitted each symptom, that we consider them all and singular as diagnostic, and acting on this presumption, he writes a book on that which mercifully to the reader and pertinently to the subject might have been compressed into a few pages. We shall not follow him, but shall only glance at the few important points upon which we distinctly take issue.

1. The stage of invasion. We have said that "Malarial

pneumonia attacks suddenly, being almost invariably ushered in by a chill, which is frequently of a severe intensity, and attended with rigors of variable duration. In very grave cases, however, the system is prostrated almost beyond the capability to react, and a prolonged cold stage is the result. Death, however, rarely is produced from this cause in the early stage, but fever, more or less developed, soon ensues. In some cases the patient seems for hours, and even days, to hover between the state of chill and febrile excitement." This, the *initial chill*, does not usually in my field of practice differ in *mild cases* from the chill of the Idiopathic pneumonia of writers, but in grave cases, of which in the space of twenty years, we have seen numerous examples, and which are more frequently observed in more southern latitudes. The cold stage from the commencement is *unlike* that of the simple form as described in these respects, viz:

1st. In its more prolonged duration.

2nd. In its danger and severity.

3rd. In the patient being usually insensible of its existence.

These important points have been either entirely ignored or only cursorily and imperfectly noticed by "the modern standard authorities." They have not been mentioned by Drake,[1] in his brief and hurried sketch of "Bilious or Malarial Pneumonitis," or by Wood,[2] in his chapter on the same subject, have not even been alluded to by Elberle,[3] and are totally omitted by Grisolle in his article on Bilious Pneumonia, or in that on Intermittent and Remittent Pneumonia in his celebrated *Treatise*,[4] or in his *later* work on *Internal Pathology*.[5] This grave and important stage of the disease has however been *noticed* by many reputable con-

1 Op. cit. p. 869.
2 Op. cit. vol. ii, p. 16
3 Op. cit. vol. i, p. 308.
4 Op. cit. pp. 398, 425.
5 Pathologie Interne, Tome premier, pp. 361-2, Paris, 1857.

tributors to our southern periodical literature, but by none so truly and graphically delineated as by the distinguished Dr. Sam.'l A. Cartwright, of New Orleans. We beg leave to transcribe this admirable description by this talented and experienced observer, which would alone entitle its author to an elevated position as an accurate clinical observer, feeling assured in so doing we are rescuing from oblivion a chapter which will not only repay the perusal of the older members of the profession, but which will be to the inexperienced a valuable aid in the study of southern diseases.

CARTWRIGHT'S* DESCRIPTION OF THE COLD STAGE OF PNEUMONIA BILIOSA.

"The approach of bilious pneumony is generally announced by the occurrence of a pain more or less acute in some part or other of the body, as the jaw, teeth, the ear, head, arms, legs, side or hips. In other cases it commences by a general soreness of the flesh and aching of the limbs with occasional wandering or darting pains. In some it begins with, but is more often attended by a vomiting or purging or by both—some degree of pain in the side, hence the common name of this disease—*bilious pleurisy*. Catarrhal symptoms most generally attend its onset. These premonitory symptoms continue from one hour to three or four days before the disease formally commences and displays its true character. It sometimes however at once commences without having been preceded by any precursory symptoms. In either case it begins with a chill or coldness of shorter or longer duration. When the patient feels very cold and shivers, we may look with certainty for a hot stage or re-action in one two or three hours. When, however, the patient *does not complain* of being *cold* or only slightly so, while the surface of his body, particularly his *extremities* are *actually cold* to the *touch*, we know not when to expect the reacting stage. The *cold plague* is the popular name in this section of the country for cases of the later description, which if not so scientific as *pneumonia typhoides* is not calculated to *lead* to *error* in *practice*. As the cold plague, *bilious*, and *head pleurisies* of the common people appear to be produced by the same causes, preceded by the same premonitory symptoms; as they occur at the same season and often attack simultaneously different members of the same family, I have considered them as the same disease and embraced all under the name *pneumonia biliosa*. We had just come to the common cold stage wherein the disease assumes

*Medical Recorder, vol. x, pp. 63–65, Philadelphia, 1826.

different forms and is soon destined to receive different popular names. A natural division here takes place.

1st. coldness with a sensation of coldness.

2nd. Actual coldness, with little or no sensation of coldness.

Let us pursue the first division. The patient complains of being cold and chilly; of pains in his limbs, head or breast, and of achings in the bones. He breathes hard, has some cough and occasional sharp, darting pains through his chest. The darting pains continue longer, are more acute and at length become fixed in some part of the thorax. The cheeks become flushed, the head aches, and the patient about this time either loses all his chilly sensations entirely—the skin becoming universally hot and the pulse active, or he still retains some degree of chilly feeling, and at the same time begins to feel an inward heat and burning which make him restless, anxious and oppressed. Sometimes the sensation of cold leaves him entirely for a few minutes, or even an hour or two, and then returns. Often the sensation of coldness is felt when the surface is actually dry and hot throughout, or hot and moist from a perspiration which occasionally breaks out and dries up again. The extremities are sometimes cold when they are not felt to be so by the patient and *vice versa*. The relation between the sensations of heat and cold and the actual heat or coldness does not exist as in health. * * * * * *

2nd. *Actual coldness with little or no sensation of cold.*

The patient generally has catarrhal symptoms, looks dull and insensible and is often comatose. There is as in the former division a great *tendency of the bowels* to assume a *watery purging*, and the strongest cathartics as well as the milder are followed by mucous or serous discharges or of the *lotura carnium* description. The urinary secretion is suspended or diminished. There is often a hoarse rattling cough, with or without expectoration—the expectorated matter is generally bloody. The number of respirations in a minute is mostly less than in health. The intervals of time between each expiration and inspiration is scarcely ever the same. Pain in some cases is entirely absent and when it is present, it is never so severe as in the preceding division of the disease.

The extremities are always cold, and indeed the whole surface of the body except about the head and breast is frequently cold, but the patient (unless for a little while when first attacked) *rarely complains of feeling much cold*. The nervous sensibility is often so much impaired, that the *patient feels neither cold* or *pain*. The tongue is dry and black in some cases while in others it differs but little from a healthy appearance. The pulse is small and tense or small and compressible. Determinations of blood to some important part of the system, as the brain, the stomach, bowels, liver or throat generally happen in a very short time after the attack, and inflammations are formed, which if not removed, prove fatal between the first and twelfth days. The course which this division of the disease

pursues is very much influenced by the change which may take place in the pathological state of the system, after the brain, liver, stomach or any other important organ becomes seriously affected. For when the brain, liver or any other important organ becomes inflamed, that pathological condition of the system which consisted in torpor and insensibility, sometimes gives way to a very different condition, viz: general reaction with a feeling of heat accompanied with acute pain, more often, however, only a partial reaction accompanied with a sensation both of heat and cold and with more or less pain, takes place; while in some cases the insensibility and torpor are so great that the system is unable to rise from its oppression, the surface continues cold and insensible, the extremities become more shrivelled, the cutaneous veins become empty, the blood more black and dissolved and is entirely prevented from becoming arterialized by the increasing organic and functional derangement of the lungs. These different pathological states of the system therefore attend the progress of this second division of the disease, viz: reaction, either general or partial, or an absence of all external reaction whatever."

Such is the minute vivid and truthful description of the cold stage in the graver cases of the disease written thirty-four years ago, by one who had the most ample opportunity of studying southern diseases at the bedside. Such are the features of a stage of this malady which have been considered unworthy of notice by Wood, who Dr. Howard declares "has given a faithful account of this variety of Pneumonia;" which have not even been hinted at by Elberle, who in "the opinion of La Roche (endorsed by our critic) has embodied all that need be said on the subject." These are the fearful phenomena of a stage which M. Grisolle, whom our reviewer has termed "the greatest of all modern standard authorities on the subject of pneumonia," has only characterized as "being similar to the ordinary violent chill of frank pneumonia," and which in the succeeding paroxysms consist only of "slight shiverings" which are usually partial and which are absent in many patients."*

But lest our critic should not be satisfied with the evidence which we have presented of those occurrences, we beg leave to cite other southern authorities upon the subject. Dr. Gibbs† of Columbia, S. C., in an interesting article up-

* Tracte de la pneumonie, p. 432.

† American Journal of the Medical Sciences, vol. iv, N. S. p. 290.

on this disease, has the following observations on this stage; "The more violent cases being taken with a chill and cold skin, and dying often without any reaction, it is sometimes called the *cold plague*. Where the disease is violent in its attack the patient suddenly becomes *cold* and pulseless, lethargic and often insensible without *previous complaint*, and I have known cases dead or die within three or four hours from being apparently well.

Dr. P. H. Lewis* in his "Medical History of Alabama," in his remarks upon this stage, says: "The patient first complains of being weak, drowsy, but unable to sleep, with a sense of constriction across the chest, the skin becomes cold, damp and shrivelled, breathing labored with all the normal respiratory sounds merged in one loud continuous mucous rale. As the disease advances a dark, red spot appears upon the cheek, the patient expectorates a *bloody frothy mucus* every symptom of thoracic *congestion* increases with fearful rapidity, the function of respiration is at last confined to the bronchia and trachea, the eye becomes glassy and protruded, clearly expressive of deep physical agony, but an unclouded reason, and in this form the disease proves fatal in from twenty to fifty hours."

Assistant Surgeon, R. H. Coolidge, in his "report on the diseases of Fort Gibson,"† observes: "This disease is sometimes rapidly fatal, being ushered in with a chill during which the brain or lungs or both, become fatally congested, the patient never rallying. In less severe cases there is usually a chill followed by fever complicated by pneumonia, which is not unfrequently double."

Assistant Surgeon, R. Glisan, in his report on the diseases at and near Fort Arbuckle;‡ remarks that "Pneumonia was often ushered in by a chill from which the patient would *sometimes never react*, others assumed an actively

* New Orleans Medical and Surgical Journal, vol. iv, p. 30.

† Statistical Report on the Sickness and Mortality in the Army of the United States, from January 1839, to January 1855, p. 269.

‡ Army Report cited, page 282

inflammatory character from the first, but more frequently a depressing influence on the circulatory system was observed throughout the whole course of the disease."

It is unnecessary to quote more in this connection. Such is the cold stage occurring in the graver cases of one of the most frequent and fatal diseases of the south as depicted by those fresh from the conflict with the deadly malaria of the south.

But this stage does not generally present these grave features in the Roanoke Valley, a higher latitude than that in which the foregoing observations were made; with us the subtle cause of the malady usually exerts an energy less potent in its manifestations and less destructive in its results. Therefore in our essay in which brevity was necessary, it has been only rapidly noticed, and the reader has been referred to our article on Remittent fever for further information concerning it.

THE REGULARLY RECURRING COLD STAGE OF MALARIAL PNEUMONIA.

But we have made additional observations in relation to the cold stage in this disease which we regard as of the highest importance. These observations do not rest upon the authority of any one, but are the result of our personal experience of the disease at the bedside, an experience extending through nearly twenty years in a malarial region and derived from attendance on a great many cases in our own practice, and that of our friends. We quote the description as given in our essay.

"The febrile action presents decided peculiarities, being usually distinctly paroxysmal and remittent. The remissions are, however, sometimes obscure, and an active fever exists during the whole day and night. On watching the patient closely, however, a coolness of the extreme parts will be almost invariably observed, generally occurring daily and during the morning hours. This reduction of temperature may be confined to the ends of the nose, toes and fingers, either separately or combined, and in grave and rare cases, may extend over the entire extremities, or even the whole surface, amounting to a state of

collapse. This coolness of the skin is not generally felt by the patient, but on the contrary, when it is present, he often complains most intensely of sensations of excessive internal heat, soliciting the introduction of cold air into the chamber: and, as we have witnessed, wishing the doors and windows to be opened, and the fires extinguished, when the thermometer stood below the freezing point near the bed of the sufferer. A marked increase of fever follows this insensible chill, which continues to increase in intensity, until an exacerbation, more or less perfect, is developed. The pulse which had been very frequent and contracted in the chill becomes expanded, acquires force, and sometimes, though rarely, becomes full or tense. The term *compressible* applies to the usual condition of pulse, and the idea entertained on its careful examination is,that the heart is acting with only a seeming force, and not with real vigor. In some few cases, the pulse has deen observed to be *nearly normal*, or *morbidly slow.*

The respiration in the chill is more frequent, and the dyspnœa more urgent than in the exacerbation.'

The reader will here observe that we have again remarked that it is only in the graver cases that the diminished temperature of the surface is most strongly marked, and that we have stated that in the cases where the fever remits and in those in which the remissions are imperfect and an active fever exists during the twenty-four hours that the cold stage may be simply characterized by a simple refrigeration of the extreme points of the nose, toes and fingers. Regarding this disease as Remittent fever with sanguineous determination to the lungs, we therefore referred the reader, in treating of the diagnosis, to our article on Remittent fever* for further information in regard to this stage. On reference thereto the chill of Remittent fever is thus described :

"This, according to my observation, never occurs between the hours of 9 P. M. and the rising of the sun on the following day, but usually between the hours of 8 A. M. and 12 M. and occasionally between 6 and 8 P. M.

At or near these periods the watchful attendant will perceive a sensible diminution of temperature of the extreme parts, viz: the nose, toes and fingers, or the whole hands and feet will be found below the natural

*Transactions of the 7th Annual Meeting of Med. Soc. of N. C. 1856, p. 48.

standard, being cool and damp, the rest of the surface retaining its febrile heat more evident in the cerebro-spinal and epigastric regions. In this condition the patient *rarely* complains of any sensation of cold but often of heat, desires to be fanned, the clothing to be removed and entreats for cold drinks."

The correctness of this description is of course contested by our reviewer—but its truth shall be easily and completely established, not only by the assistance of authorities, but by the admissions of our critic himself. In his Review* the following remarks occur:

"We have now reviewed at great length, Dr. Manson's account of the leading symptoms, and dwelt particularly on those features that are considered distinctive of "malarial pneumonia;" we have carefully compared it with ordinary simple pneumonia as it is so faithfully described by many of the best modern writers on the subject: we have endeavored to separate and define those symptoms that truly belong to the former and attempted to show that others adduced by our author as diagnostic do not in fact form an essential part of its history: and what is the conclusion to which we have been naturally led? Why that some of the leading phenomena of remittent fever are engrafted upon and blended with the rational symptoms of ordinary pneumonia, and that those symptoms thus united with, and complicated by the tokens of an accidental affection represent and portray the so-called "malarial pneumonia." We are not surprised then that when Dr. Manson comes to unfold his views of the "cause and nature of malarial pneumonia," he should be led to declare that "the reader who has had frequent opportunities of observing remittent fever at the bedside, or those who have not, who have honored the writer (Dr. Manson) by a perusal of his imperfect descriptions of that disease, cannot fail to perceive the close resemblance between the phenomena presented by that affection and the disease under consideration; indeed the *similitude is almost perfect with the addition of the signs and symptoms of the thoracic lesion.*" *What* thoracic lesion?" *Pneumonia?* Precisely, it is *true pneumonia* complicated by the impression of a malarial law, and this readily explains the fact that *Dr. Manson's "malarial pneumonia"* offers so many points of natural and striking resemblance alike in its onset, march, leading phenomena and termination with the ordinary forms of pneumonia with which we have compared it."

The reader here perceives that Dr. Howard declares that in this disease the leading phenomena of Remittent fever are

*N. C. Med. Journal, vol. ii, p. 423-4.

"engrafted upon and blended with the rational symptoms of *ordinary* pneumonia."

For the sake of argument, for a moment we will admit this, as in order that we may prove the correctness of our delineation of the *cold stage of malarial pneumonia*, it will only be necessary to establish what are the symptoms of the cold stage of Remittent fever. We will recount to the reader *where we first learned them.*

A CLINICAL LECTURE ON THE CHILL OF REMITTENT FEVER.

When we first came to practice medicine in the Roanoke Valley, our chief information in regard to remittent fever was derived from the popular text books of that day, viz: the treatises of Eberle, MacIntosh, Dewees, Thomas, etc., the former being particularly recommended to southern students. As this fever was quite prevalent the next autumn, their pages were diligently restudied, in the expectation of receiving a summons to a case. The ground was fully occupied by experienced physicians, and we had to wait some time in vain, but at length we received a call to attend a sick overseer on a neighboring plantation, whom we found in the following condition. On approaching our patient who had been ill for several days, we observed that he was very restless and could lie but a few moments in the same position. His respiration was anxious and oppressed; his eyes suffused; his head hot; his tongue dry and heavily coated; his pulse quick, frequent and of diminished volume. He complained of violent headache and pain in his loins and limbs and was extremely thirsty. On conversing with his wife aside, in order to elicit a history of the case, we incidentally remarked that "her husband had a very high fever!" Upon which, with a look of disapprobation, she replied, "that we were mistaken, that her husband had a chill!" We smiled incredulously, but thinking perhaps, that we might have been led into error from a too hasty examination, we again drew near to our patient and feeling that his forehead, chest and abdomen were very

much above the natural temperature, we inquired "if he felt cold?" To which he answered in the negative, saying that "he was too warm;" that he "felt burning up inside" and begged to be permitted "to take off some of the covering and drink as much cold water as he wanted!" We now looked triumphantly at his wife who in no wise disconcerted, replied. "Doctor feel his toes and nose!" We did so, and to our astonishment, found them as well as the extremities of his fingers, to be as cold as the dead.

Such my readers, are the symptoms daily observed in a malarial epidemic, and which, for want of a better term, we have designated as the "Insensible chill of Remittent fever," and which we thought to be perfectly familiar to every man, woman and child in a malarial region, but which are not as fully described as in this simple recital, as far as our researches extend, by any standard author, either living or dead, in ancient or modern times.

This stage is sometimes, however, not even so well marked as the case detailed. Occasionally it is only characterized by a slight coolness instead of coldness, of the extreme parts, and in other cases it is only manifested by the comparative inequality of heat existing between that of the head and trunk and the extremities, the succeeding fever being usually intense and prolonged in an increased ratio with the distinctness of the cold stage.

But our critic, greatly to our astonishment, contests the existence of these well and widely known symptoms, although admitting that in his form of pneumonia "the leading phenomena of the Remittent fever are engrafted upon and blended with the rational symptoms of pneumonia." He avers that he is unable to verify from his own experience, a part of Dr. Manson's description of the symptoms that accompany the daily paroxysmal and remittent course of the febrile movement in this form of pneumonia, that he does not remember to have witnessed *this* particular condition, this "*insensible chill*," that he "supposed that one *generally feels cold* when suffering from a *chill*, and although not ig-

norant that in *certain forms* of *periodic fever,* those usually termed malignant, *pernicious* or *congestive,* and more especially the *algid* variety, the patient may complain of heat either internal or external during the cold stage, although to the touch of others his body may present even an icy coldness; but in the simple chill of ordinary intermittent and *remittent* fevers, the sensation *of cold* is *often out* of *proportion* to the *actual loss of surface heat,* and there may be heavy complaints of a feeling of severe cold when to the hands of bystanders there is abnormal heat, "and that it is perhaps in consequence of his (our) *peculiar views* in regard to the character of the chills of remittent fever and their daily occurrence as much as any thing else that Dr. Manson is induced to declare in this production, that there cannot be found in any standard work a correct description of its characteristic features as it now presents itself," that it has been four years since these ideas were first *set afloat,* and that they have been given more than usual prominency, yet no one so far as we (he) can learn, has verified their accuracy.

Whilst cheerfully admitting that in the chill of intermittent fever, the sensation of cold may be intense, and that even in the cold stage of remittent fever the sensation of cold is *sometimes* not only experienced, but may in *rare cases* be "out of proportion to the actual loss of surface heat," yet we contend that the sensation of cold *after the initial chill* in the large majority of cases of remittent fever occurring in this region is not *felt* by the *patient,* and in those cases attended with vascular determination to the lungs constituting this form of pneumonia, we do not remember to have witnessed a single instance in which, after the initial chill the patient has even been aware of the presence of the cold stage. But we have premised that Dr. Howard in admitting that "in certain forms of periodic fever—those usually termed malignant, pernicious or congestive, and more especially the algid variety, the patient may complain of heat, either internal or external, during the cold stage although to the touch of others his body may present an icy coldness," and

also in declaring that in this disease "the leading phenomena of Remittent fever are engrafted upon and blended with the rational symptoms of pneumonia," has unwittingly yielded all that we contend for, for it is well known that remittent fever as it has appeared during the past twenty years, or more in this region, has been emphatically a congestive disease, that it has differed only in *degree* and *not in kind*, from the pernicious fevers of authors, the cold stage being only more protracted and prominently marked, and the internal congestions more intense in the latter; that in fact they are *one* and the *same* disease, it being not uncommon for a mild case of remittent in the second or third paroxysm to assume the worst features of the algid or pernicious grade, and the latter in turn, assuming the benign character of the former. These facts will not be contested by any familiar with the literature of the disease. M. Maillot* observes in his justly celebrated work, "I think that it remains *demonstrated* according to the *analysis of the symptoms* that the pernicious fevers only differ from the ordinary intermittent fevers by the violence of the *congestions*," and M. Broussais† remarked in nearly the same language, "the fevers which are called pernicious or malignant, do not differ from other fevers except in the violence and in the danger of the *congestions*." It was clearly from a knowledge of these facts that Alibert, Laennec, Maillot, (Op.cit.) Bonnet‡ and others have classed the disease with "*Les Fievres remittentes pernicieuses peripneumoniques.*"

In declaring, as we have, that the cold stage of our common remittent fever has been very *imperfectly* described by any modern standard authority, let us not be understood as asserting that a regularly recurring chill has been alto-

*Traite des Fievres Intermittentes Par F. C. Maillot, p. 42, Paris, 1836.

‡Principles of Physiological Medicine, by F. J. N. Broussais, translated from the French by Isaac Hayes, M. D. and R. Eglesfield Griffith, M. D., p. 449, Phila., 1832.

†Traite des fievres Intermittentes, Par Auguste Bonnet, D. M. P. p. 53 2me, ed., Paris, 1853.

gether unnoticed by those who have treated the subject. In noticing this stage M. Malliot* observes, "According to the greater or less distinctness of the paroxysms M. Baumes has established three series of remittent fevers, and *clinical observation confirms this important distinction.* "The first comprises all those fevers in which each paroxysm commences with a chill; the second includes all those in which the accessions commence with a *simple refrigeration of the extremities and nose*, or with a cough more or less severe, and the third comprises all those in which the paroxysms are not announced either by chillness or coldness or partial reduction of temperature and are only remarkable for the return of fever, an increase of heat and other febrile symptoms which decline after reaching their highest degree of intensity." M. Nepple† merely observes of this stage that the chill of remittent fever is ordinarily slight and superficial. When it is violent it announces the greatest danger and that fears should be entertained that the existing inflammations and congestive irritations might increase to a fatal intensity," and that "the paroxysms are *ordinarily* preceded by a *shivering* or *coldness of the feet.*

M. Grissolle‡ briefly describes the stage thus: "the exacerbations like those of an ordinary intermittent are announced by chills or a simple coolness of the body, particularly marked at the extremities where the skin often assumes a bluish or livid color.

Wood§ after alluding to the initial chill has these few words on the subject: "Another paroxysm of fever then takes place, *sometimes* like the first, beginning with a *chill* and subsibing with *perspiration*, but *frequently* also *without either the one or the other.*"

*Traite des fievres, p. 165.

‡Essai sur les Fievres Remittentes et Intermittentes Par P. Fiederie, Nepple D. M. P, p. 128, Paris, 1828.

†Traite elementaire et pratique de Pathologie Interne par A. Grissolle 7me ed. p. 159, Paris 1857.

§Op. cit. i. 266.

Drake* in his work which in many respects is the most valuable which has been issued from the press of this country, has signally failed in his description of the chill of remittent fever. He remarks: "If we suppose an ague-shake to be reduced to a mere *chill*, but the *subsequent*(?) hot stage aggravated and prolonged we shall form a just conception of the relations in symptomology between intermittent and remittent fevers." That the chill may or may not amount to shivering; the patient now becomes *thirsty*, or if so *before*, becomes *more so*, his pulse increases in frequency, and his headache grows worse. In a few minutes or an hour or two the chillness ceases and is succeeded by febrile heat, etc., and that after continuing in this state of fever which is succeeded by the morning's remission then an increase of *thirst*, *headache* and frequency of the pulse usher in a second chill which instead of being more, is often less violent than the first.

THE RESPIRATION IN THE CHILL.

Our reviewer has the following remarks on this symptom: "Dr. Manson states that the *respiration* in the *chill* is more *frequent* and the *dyspnœa* more *urgent* than in the exacerbation. The peculiar condition above noticed in which a coolness of the extreme parts is said to be daily and almost invariably observed during the morning hours and in which there are great complaints "of *excessive internal heat*," is the one we suppose to which reference is here made. This is the insensible chill, and is followed by a marked increase of fever. As we do not remember to have witnessed this particular condition, this "insensible chill," during the march of malarial pneumonia, we can neither affirm nor deny the correctness of the above statement in regard to the respiration and the dyspnœa at that precise period in the progress of the disease. We suspect however, that the peculiar state designated by Dr. Manson as the "insensible

*Op. cit. 95, 96.

chill," is in a great many instances at least, but the simple remission of the fever. According to our observations, after several paroxysms of remittent fever have occurred—usually from three to five—it is *excessively* rare for the febrile exacerbations to be preceded by a chill or even by rigors. . . . . During the chill proper, in both varieties of this fever just mentioned, the respiration is generally a little irregular and somewhat hurried, but on the succeeding exacerbation of the fever it becomes regular and still more accelerated." "It may be urged that during the period of chill the lung undergoes increased congestion and that *a priori* the respiration must be more accelerated at that time. But this argument *assumes* that the *congestion abates* during the succeeding exacerbation, and therefore *begs* the question." It will be seen that our reviewer declares that in the chill proper, i.e. the sensible chill, the respiration is less frequent than in the exacerbation, that it is *excessively rare* in remittent fever after three to five exacerbations have occurred for the febrile exacerbations to be *preceded* by a *chill*, and that he does not *remember* to have witnessed this particular condition, the "insensible chill," that is a *cold stage unfelt* by the patient at all, either in ordinary remittent fever or malarial pneumonia. That a man of talent and experience, as our critic assuredly is, should make the declaration that in the ordinary remittent of this region that a chill or cold stage cannot be present without the knowledge of the patient is as novel as it is to us inexplicable. Evincing as it does, the most superficial observation and imperfect knowledge of the disease, we might here rest the subject and on this issue alone submit the correctness of our descriptions to the judgment of the reader, but as our critic has endeavored to sustain his assertions by an appeal to reason and authority, let us examine both and ascertain on which side they preponderate.

It would be reasonably supposed *a priori* as our critic intimates, that during the period of chill in which the lung undergoes increased congestion, that the respiration must be

more accelerated, nor does it "beg the question," but simply declares a fact, that in the exacerbation the congestion abates. Look at the patient in a state of chill, in that more perfect grade of the disease usually termed a congestive or Pernicious cold stage; the blood has forsaken the extremities,and seems almost in a state of stasis in the internal viscera, and sometimes in such quantities as Drake* observed, as to suspend the action of some of these great organs, and by its apoplexy occasion the death of the whole. Would it not be a rational presumption, that if this stage of undue determination of blood, this *"periode de concentration"* (as the French express it,) should occur in a patient, already the subject of a *"true Pneumonia,"* according to the pathology of our reviewer, that the thoracic oppression, the dyspnœa and increased compensating frequency of the respiratory movements would ensue; and that on the contrary, that in the stage of reaction, when the blood retracted again from the centre to the circumference, thus in a measure disburdening those organs, that the respiration would become less embarrassed. Nor are these deductions opposed to facts, but are amply supported by them as observed by the most distinguished authorities.

In all febrile chills, inquires Broussais† is there not cephalalgia? Is there not dyspnœa and cough? And again in another work‡ he truly observes, "*the obstacle* to the *circulation of the blood* always temporarily exists during the *chill*, because there is constriction of the heart, the two venous systems also swell at this moment, not being any longer able to readily empty themselves into the heart which does not permit itself to be dilated. *Examine patients at this period* and you will find them with *short interrupted breathing*, the pulse contracted, the heart convulsively laboring instead of freely dilating and contracting; they will all complain

*Disease of Interior Valley, N. A., 53.

† Histoire des Phlegmasies. Tome premire, p. 130. Quatireme ed. Paris, 1826.

‡ Principles of Physiological Medicine, (Transl: cited) p. 454.

of a kind of *oppression of the chest*, somewhat resembling asthma, and you will often observe in them short paroxysms of dry cough, depending on the accumulation of blood in the pulmonary vessels."

"During the cold stage," says Dr. Condie in his note on typhoid Pneumonia,* as he terms the disease, "the Respiration is *short* and oppressed."

But it is unnecessary to multiply references on this point. Let the reader bear in mind that the cold stage is the stage of danger in this disease, the stage to whose prevention our remedies are chiefly addressed, the stage in which the internal congestions are most intense, and which, if arrested, usually places his patient in safety, and we will have attained our object in dwelling upon this branch of the subject.—Let it not be supposed that in insisting upon the existence of a cold stage in this disease, we are endeavoring to magnify its importance in other respects. When it is considered that it constitutes such a frequent symptom as to form a portion of its natural history, that it is one of the most important signs in forming a diagnosis between it and other forms of disease classed under the generic term Pneumonia, its value cannot be too highly appreciated. We know that we can candidly and truly state that in no instance where we have had an opportunity of remaining twenty-four hours with a patient laboring under this disease, have we failed to detect it.

CASE OF URÆMIC ECLAMPSIA OCCURRING IN A MALE, THE SEQUEL OF SCARLATINA.

BY JAS. H. DICKSON, M. D. OF WILMINGTON, N. C.

I am induced to report this case in consequence of its novelty in my experience, and as calculated to confirm that Pathology of Puerperal Eclampsia which refers it to Uræmic poisoning.

*Watson's Practice, 2nd Am. ed. p. 613

The subject of the case is a stout boy of ten or eleven years old. In November last I was called to see him in consequence of a marked drowsiness, almost amounting to stupor, which had come over him a day or two before my attendance was desired. I found him oppressed with drowsiness, from which he could be roused by speaking to him in a loud tone, but into which he would almost immediately relapse. There was a puffiness or œdematous intumescence of the face, which induced me to suspect that the case was the sequel of an attack of scarlet fever, and upon inquiry, the mother recollected, that about a fortnight before he had a slight eruption, but was so little effected by it as not to take his bed for it. Scarlet fever was not susp cted, and he was so little indisposed by it, that no medical advice was desired in his case.

At the time of my first visit his urine was scanty and turbid, depositing a dark, sooty material, having much the appearance of broken down blood globules.

With a view to relieve the cerebral oppression, an active hydragogue was prescribed, together with a blister to the back of the neck. These measures seemed to be productive of decided relief. After the bowels had been well moved, the drowsiness disappeared.

A mild saline diuretic of Acet. Potas. and Spts. Nit. Dulc. was next prescribed; and for two or three days the case seemed to be progressing favorably. The urine however, still remained scanty in quantity, and highly albuminous, exhibiting for the most part the sooty deposit before refered to.

After a few days, this condition of the urine was replaced by Hœmaturia—clear florid blood, passing with the urine. To meet this sympton, leeches were applied to the region of the kidneys, and an active saline purgative given.

Notwithsntading the copious local depletion and active catharsis, he was taken very unexpectedly with a severe convulsion. With very little inte mission, convulsions continued to recur up to the time of my arrival, about an hour

after the first spasm. I immediately opened a vein in the arm, and after about six or eight ounces of blood had been drawn, the convulsions subsided, and did not again recur. A combination of Calomel, Squills and Digitalis was now prescribed for him, and continued until slight ptyalism was induced.

This, followed by tonics, resulted in a convalescence, which led to a speedy re-establishment of his health.

This case corroborates the observation very frequently made, that the activity of the renal disease, bears no proportion to the apparent intensity of the original febrile attack, and would seem to confirm the opinion expressed by many practical writers, that where the cutaneous efflorescence is slight, the blood is less apt to be depurated of its poisonous element, and severe sequelæ are more apt to occur.

The point in the case to which I wish more particularly to refer, is the dependence of the eclampsia upon the uræmic state of the blood, thus confirming the probable correctness of the opinion that the puerperal form of the disease is dependent upon the same condition of the circulating fluid.

Many of the ablest observers and most intelligent pathologists seem inclined to adopt this view of the pathology of Puerperal Eclampsia, and yet there are some who regard the morbid condition of the kidneys as a consequence, and not a cause of the convulsions, an accidental secondary hyperæmia of the kidneys, caused by the convulsion and the hydræmic state of the blood. In the case which I am describing, it cannot have escaped notice that the morbid state of the kidneys preceded the occurrence of the convulsions many days, and whether we admit it to have stood in the relation of cause to the eclampsia or not, it could not possibly have been its effect.

The case may, I think, be regarded as furnishing pretty strong evidence of the dependence of eclampsia on the retention of the excrementitious elements of the urine in the

blood, and as rendering it highly probable that that hypothesis which refers Puerperal Eclampsia to uræmic poisoning is a correct one.

Another point worthy of notice in this case, is the very obvious and decided efficacy of blood-letting in relieving the eclampsia.

A few years ago it would hardly have been thought necessary to call attention particularly to the efficacy of a remedy which would almost immediately have been resorted to with confidence, by every practitioner. But the opponents of blood-letting of the present day are evidently inclined to carry their views and practice to a radical extreme, and it becomes necessary to resist the dangerous counsels of men occupying positions of such extensive and controlling influence as those of Drs. Bennett and Todd, who seem disposed to ignore entirely this useful and indispensible remedy. I do not contend that it is applicable to every case of Uræmic Eclampsia, whether Puerperal or Scarlatinous, or that it is of itself, absolutely curative; but that in cases in which it is indicated, it is a necessary means to guard the brain against injury from the violent convulsive paroxysm, and to place the system in a condition better adapted to be favorably impressed by the action of other remedies.

COMPOUND FRACTURE OF THE ANATOMICAL NECK OF THE HUMERUS.

BY J. B. HUGHES, M. D., OF NEWBERN.

April 4th, 1858.—I was called to see negro man Jacob, aged 26, a carpenter by trade, healthy, temperate, and of spare, muscular habit. I received the following history of his case. Four days previous, whilst wrestling with one of his associates, he was thrown heels up, and striking the ground on his left elbow, with the weight of his body, and

the force of the fall, had his shoulder dislocated, and the head of the bone thrust through the skin into the arm-pit.

Upon examination, I found the bone had been drawn into its place; the opening in the axilla discharging continuously a large quantity of serous fluid; the elbow a little off from, and back of the body; the shoulder retaining its roundness with no depression under the acromion process, greatly swollen, and so sensitive that it was impossible to examine it with satisfaction. An effort to make slight rotation produced spasmodic pain along the arm and fingers. He had high fever, furred tongue, and was unable to sleep from the intense suffering. I placed a pad in the axilla, the arm on a pillow, and supported the hand with a sling; prescribed lotion of acet. lead and flax seed poultice to the shoulder, and mass hydrarg. grs. x, pulv. doveri, grs. vi, to be made into two pills, to be taken at once. The next day I found his general condition much improved, and though his shoulder was not so painful while quiet, could not suffer the slightest effort at motion. The state of high inflammation of the joint continued for about a fortnight, during which time he had become much exhausted, and had had several chills. The blue mass and dovers powders had been repeated every second or third night, and the dovers powder alone the other night, and had taken camphor julep as his strength required. From this time forth he began to improve. He had occasional fever, but not enough to call for any special treatment. His shoulder still remained swollen, and though not so sensitive as it had been, an attempt at examination gave considerable pain, and as yet, no positive proof of the exact nature of the accident. The profuse discharge of serum was kept up by the inflammation of the extensive serous membrane which lines and is connected with this joint. The edges of the wound in the axilla had a watery, unhealthy look, and the astringent washes which had been used from the beginning of the treatment had little effect upon it.

August 1st.—By taking hold of the elbow there could be slight motion in the shoulder, but no crepitus detected. The fleshy parts of the arm and shoulder were hard and solid. An abscess formed about the insertion of the deltoid, which when lanced, seemed to relieve in a degree, the discharge from the wound in the axilla. His shoulder was repeatedly cupped, various liniments used, and when the acute inflammation sufficiently subsided a blister was applied. This treatment was continued without any great improvement in the swelling and hardness of the shoulder. When the discharge at the posterior abscess partially ceased, another formed at the end of the bicipital groove and as each seemed more or less relieved by the discharge from the others, the inflamed joint was clearly the source of them all.

Nov. 1st.—The discharge from the various openings had greatly diminished, but the shoulder was still large, and painful when moved with quickness. This unpleasant state continued till Oct. 22, '59, when I discovered by probing the wound a necrosed portion of bone, which upon further examination was found to be loose. A little manipulation with the forceps brought it to the opening of the wound in the axilla, which I enlarged by an incision on each side, and delivered the foreign body, which proved to be the entire head of the humerus, which had separated from the tubercles at the insertion of the capsular ligament. The articular head of the surface was firm and smooth, but devoid of covering, while the lower surface of it was a complete honey comb. In less than a fortnight from this time, the patient was entirely well, with all openings closed. The affected arm was one inch shorter than the right, and from want of use had become smaller, which, however, is now scarcely observable. His shoulder joint is anchylosed, but he has left to him a very useful arm. For several months after getting well, any great exertion, or very inclement weather would give slight pain in the shoulder, but he no longer suffers any inconvenience from either, and is almost as

available a servant as ever. The case presented many points of interest to me. For though compound *dislocations* of the joints occur, it is almost always of the elbow, hand, or lower extremity; and compound *fracture* of the joints particularly of the shoulder, is an extremely rare and dangerous injury. In the painful and swollen state of the joint, it was impossible to decide between compound dislocation and fracture of the bone. The extensive arthritis resulting, the discharge of matter, the inflammation and solidification of the fleshy part of the arm required great patience and perseverance to overcome, and the result has manifested in this case, the benefit and importance of conservatism in surgery. Resection of the joint was several times suggested to my mind; but even if his condition would have justified the attempt, his life would have been endangered, and perhaps forfeited, with the prospect of no other good result than the one now attained. Amputation has been Sir Astley Cooper's great remedy for compound dislocation of the knee-joint. He warmly advocated and successfully performed resection for compound dislocation of the elbow; but for the shoulder both of these operations present much greater difficulties in execution, and less chances of success. In a case of this kind anchylosis is the happiest termination that could be hoped for, and it is imperative on the part of the surgeon to "wait and watch," and not imperil the life of the patient by an operation, unless it offers him the only chance of escape from death.

A SKETCH OF AN EPIDEMIC OF DENGUE OR BREAKBONE FEVER, AS IT PREVAILED IN WILMINGTON, N. C., IN THE AUTUMN OF THE YEAR, 1860.

BY JAS. H. DICKSON, M. D.

SYNONYMS, *Dingee*, *Dunga*, *Dandy*, *Bouquet*, *Breakbone Fever.*

In the foregoing barbarous nomenclature, the curious philologist will be apt to find his ingenuity puzzled and

his industry baffled, in his attempt to trace the origin of a word which has been adopted to designate a very marked and peculiar form of disease, without being furnished with that "*filum labarynthi*," which its history affords.

It certainly furnishes a rare instance of a word finding its way into scientific treatises from so humble an origin; for it carries with it the evidence of its negro parentage, not patent enough to be discovered by any ordinary process of word-hunting, and yet sufficiently obvious when the inquirer has been started on the proper track.

The West Indian negro gave it the name of Dandy fever, from the stiff gate which it caused its subjects to assume, when suddenly seized with it, as they sometimes were, when passing along the street. When it appeared in Cuba, this name, in undergoing the Spanish pronunciation, was changed into Dunga or Dengue, which it still retains.

This very unique and peculiar affection, has never, so far as I have been able to learn, prevailed in this place before the occurrence of the epidemic of which I shall now endeavor to give some account.

It seems indeed to be an unfrequent visitor of any locality, rarely, if ever appearing, for two consecutive seasons in any place.

The first notice which we have of this form of fever, is in a paper by Dr. Jas. Mellis, giving an account of its prevalence in Calcutta, in the year 1824.

In the latter part of 1827, it made its appearance in the West India islands. In the Spring of 1828, it broke out in New Orleans, and in the fall of the same year it prevailed in Charleston and Savannah. Papers descriptive of the disease as it prevailed in the latter cities, have been published by Drs. S. H. Dickson and W. R. Waring.

It would thus seem to be a tropical or tropicoid disease, and yet if we can rely upon the correctness of the opinion which regards the *so-called* breakbone fever, which Dr. Rush describes as prevailing in the autumn of 1780, in the city of Philadelphia, as the disease in question, or the true

Dengue, it would seem occasionally to transcend its native limits.

Dr. Rush describes the Philadelphia epidemic as a bilious *remittent* fever to which the name of breakbone fever was popularly applied in consequence of the severity of the pains with which it was attended.

Not having at hand Dr. Rush's description of the disease, I am in some doubt, whether to regard that instance, as one of the genuine Dengue, or only as a form of remittent fever, with the usual spinal and neuralgic pains more than usually developed.

Such varieties of remittent fever are not very rare, but they must not be confounded with this very peculiar affection.

The genuine Dengue seems to be a complex malady, combining some or all of the characteristic features of our ordinary autumnal remittent fever, with very marked symptoms of rheumatism, together with, in many cases, an eruption, closely resembling in some instances urticaria, and in others a scarlatinous erythema. Occasionally, the eruption assumed a miliary, and in some instances a rubeolous appearance.

In those instances in which the eruption did not show itself during the progress of the case, the occurrence of cutaneous desquamation at the close of the attack, left no doubt as to its true character.

This form of fever seems to exhibit no very marked prodromata. In some rare instances it makes its approach insidiously, but for the most part it attacks with abrupt suddenness.

A slight chilliness ordinarily ushers in a febrile paroxysm of greater or less severity, accompanied with head ache, chiefly in the back of the head, and distressing pains in the loins and in the course of the large nerves in the lower extremities.

The entire cerebro-spinal nervous system, as well as the peripheral extremities of the nerves, as in the great centres gave token of its pathological condition.

In some instances, the chill was of very marked intensity, and the febrile reaction in such cases was apt to be of corresponding severity.

Restlessness and a sense of great debility are apt to be prominent attendant symptoms.

The pains in the limbs and joints described as rheumatic, though for the most part uniform in their resemblance to that disease, were occasionally seemingly capricious in their character, attacking the smaller joints, and now and then, the stomach and bowels, giving the case in these features no slight resemblance to gout.

In our epidemic, an attack of Dengue was by no means uniform in its duration or its intensity. Indeed it ran through every gradation from the mild ephemeron, scarcely requiring any treatment, to a grave form of fever of ten or twelve days duration.

A striking feature in most cases of any severity, was nausea and precordial distress. In some instances the gastric irritability was a very prominent symptom, and one which, by its obstinate persistence, seriously embarrassed the treatment.

It is usual to ascribe the occurrence of this disease to epidemic influence, and in the present state of our knowledge, it is perhaps impossible to assign it a more specific origin.

This epidemic influence or occult cause would seem to have engrafted itself (in our epidemics) on the ordinary morbific cause of autumnal remittent fever, for the cases evidently partook largely of that character, though in some of its features it was almost Protean, for we might, with strict propriety, characterise one case as rheumatic, another as gout, another as scarlatinous, &c.

It seemed to be no respecter of age or sex, all classes being equally liable to be attacked by it.

A very small fatality seems to be a notable characteristic of the Dengue; for though many suffered severely and

some were seriously threatened, I believe no fatal case occurred.

Some of the writers who have given us a description of this form of fever, think that they have discovered in it a resemblance to the yellow fever, in the circumstance of its having but one paroxysm, with a long and delusive intermission, followed in the one case by a return of a fatal exacerbation, and in the other by a febrile paroxysm, which undergoes solution by the occurrence of a cutaneous exanthem.

I am constrained, however, to regard this as a forced and painful analogy. At any rate, such a form of the disease was not observed in the epidemic which I am endeavoring to sketch in this paper.

Instead of the peculiar paroxysmal form of yellow fever, this epidemic assumed the garb of *billious remittent*, with daily exacerbations and remissions.

Its want of fatality, too, is a feature which separates it widely from yellow fever, and the extinction by the occurrence of frost, is equally characteristic of billious and yellow fever.

The most probable conclusion from all our observations and comparisons, would seem to be, that the Dengue is Protean in its phases, and "*sui generis*" in its nature.

Sequelæ—A very striking and somewhat protracted debility was a not unfrequent sequel of the disease.

In some instances, among children, a paralysis in the lower extremities occurred, and was of considerable duration; but I believe this serious sequel of the malady has not been permanent in any instance. Dr. W. G. Thomas informs me that several cases of this kind fell under his observation, all of which have recovered or are convalescing.

The occurrence of such a sequel of the disease as this, indicates that the nervous centres bear very largely the onus of the disease, and exhibits an intensity of action of

the morbific cause, far exceeding the action of the cause of most other forms of fever upon the spinal axis.

When paralysis occurs as a result of convulsive-remittent fever in children, it almost invariably assumes the form of hemiplegia, and is generally of very transient duration.

Treatment.—Many of the milder cases were treated by the exhibition of a mild aperient and a sudorific anodyne. The severer cases seemed to call for the treatment which has been found needful and appropriate in our ordinary form of billious fever. A mercurial cathartic (generally a pill of mass. hydrarg.) followed by a saline aperient, or a dose of calcined magnesia, was administered at the invasion of the attack. This was followed by the use of sulph. quinine, with or without the addition of an opiate as circumstances seemed to indicate.

In the large majority of cases, the opiate was found indispensable, for in by far the larger proportion of the cases, the spinal and articular pains were decidedly pronounced and called loudly for their administration.

Diffusible stimuli were found useful in some cases, in which unusual debility and prostration occurred; but the great mass of the cases were conducted to a satisfactory convalescence by the use of mild tonics.

SELECTIONS.

Practical Medicine.

DIPHTHERITIS.

BY C. A. HARTMANN, M. D., CLEVELAND, OHIO.

THE disease now generally designated by this name, has been brought forward as a new affection, and largely discussed during the last two years, especially in France, England and America. It appears to have been frequently confounded with croup, gangrenous and scarlatinous angina, and other affections of the throat; even Bretonneau, who principally initiated, in 1821, the recent consideration of the disease, did not distinguish it clearly, giving it the names diptherite, croup, angina maligne, angina gangreneuse, promiscuously. According to him, it is the same with the Egyptian Disease of the Greeks. Dr. Baird had previously in this country recorded the particulars of an epidemic that occurred in New York in 1771. He described it under the name of Suffocative Angina. Other older names applied to it are Cynanche Maligna, Scarlatina Anginosa (in America often used up to the present day), Morbus Strangulatorius (Dr. Starr, 1748), Fothergill Sore Throat, Throat Distemper, Malignant Sore Throat, Malignant Angina, Membranous Angina, etc.

Hippocrates seems to have been acquainted with it, and a very good description is given by Aretæus. Since then their is no record pointing to diptheritis until the day of Cullen, Huxham, Fothergill, Starr, and others, in the second half of the last century; and although they described it as "a new and separate disorder," it fell again into neglect, until more recently the notices of Baird and Bretonneau were followed by a very extensive epidemic appearance of the disease, it spreading, between the years 1818—57, over France, since 1857 over England, and since 1845 over this continent.

Besides the general name, *diphtheritis*, *diphtherite*, *diphtheria*, (meaning an exudation in patches,) a large number of designations are found in the works of recent writers. It is the *angina diphtheritica maligna* of Trousseau; *angina couenneuse* of Duche, Bouchut, and other French authors; commonly called *diphtherie* in French; the *plastic pharyngitis* of Porry; the *membranous disease*, commonly called *membranous croup*, of Cotting; the *hogskin angina* of Palmer; *diphtheric*, *membranous*, *pseudo-membranous*, *putrid*, *malignant*, and *epidemic sore throat*, *scarlatina*, or *epidemic angina*, *malignant cynanche*, of other American physicians. Some call it simply *sore-throat*

Diphtheritis proper is eminently fatal, mostly epidemic, but not unfrequently sporadic disease, of a very peculiar character, appearing with a great variety of symptoms, but presenting, as general features, a marked prostration of the nervous system, and the formation of a pseudo-membranous exudation, which always commences with patches upon a congested surface and manifests a particular propensity to attack the mucous membrane of the fauces, spreading downwards and upwards; it is, however, occasionally seen upon other mucous membranes, and even upon the skin. Children suffer particularly, but young persons and adults are not exempted from the disease.

The symptoms, not only at different times and in different locations, but during the same epidemic and in the same place, are so variable that it is difficult to give a description of them of any general applicability. "In not two cases," says one author, "is there a perfect resemblance, either in the grouping of the symptoms, in their order of succession, or in the degree of their individual symptoms." Some cases commence with fever; in others there is none, or it only appears after some time; there may be a diminished secretion of urine or not; albuminuria is often present, but frequently wanting; so it is with headache, difficult respiration, diarrhœa. Some of the more constant symptoms are general malaise, impaired deglutition, and a very weak, accel-

erated pulse. One fact seems to be pretty well established: the statements of Trousseau and others show that the disease since 1846 assumed a more violent and malignant character, entirely different from what it was in the time of Bretonneau.

The last named physician gave the following description: The disease usually commences in one tonsil, seldom in both; slight fever; white spots on the affected tonsil; enlarging of the cervical glands. Redness surrounds the concretion, and it spreads rapidly to the velum palati, uvula, the other tonsil, and the pharynx. The swelling of the lymphatics either subsides or remains stationary. After some hours or days a ringing cough, dry, or accompanied by a frothy expectoration, announces the extension of the disease to the respiratory organs. There are now irregularly shaped patches of redness, without swelling, coated with a concrete exudation. One or more long, narrow, red streaks extend to the pharynx or trachea; a stripe of concrete matter is seen on the center of each of these streaks, and small, semi-transparent vesicles often appear in the substance of these incipient concretions. The edges of the pellicle are gradually lost in the surrounding mucus, which is no longer viscid but coagulated near the concretion. The latter can be easily detached; it is, however, in such case speedily reproduced being now firmly adherent, often several lines thick, and changing its color from a yellowish-white to yellow, gray, and finally to black. The subjacent surface is usually of a slightly red tint, more vivid at the periphery of the patches, and sown all over with points of a deeper red color, through which point the blood readily transudes. Now the alteration of the organic surfaces becomes more manifest; often concrete matter is deposited into the very substance of the mucous membrane; there is a slight erosion, and sometimes echymoses, in points exposed to friction, or from which the avulsion of the concretions has been attempted. The corrupted exudations exhale an infectious order. If circumscribed, they appear depressed, from the œdematous swelling of the

surrounding cellular tissue; if they are, on the contrary, extended over considerable surface, they become partially detached, and hang down in shreds more or less putrefied, simulating the last stage of sphacelus.

Dr. David Wooster, of San Francisco, remarks on this (*Pacific Med. and Surg. Journ.*, *May*, 1859), that "no vesicles have ever been observed in the forming concretion on this continent: that here at the incipient state the false membrane adheres most tenaciously, and is not easily detached; that the edges of it shade off so insensibly into the natural aspect of the neighborhood as to render a rigorous definition of its limits impossible; that the centre of the patch is whitish or grayish, and opaque, while its periphery becomes more and more translucent; further, that the affected parts never bleed, except when violence is used to tear or scrape off the false membrane, and then the bleeding stops with remarkable promptitude. and does not occur again, except on the repetition of the violence." Wooster states, also, that "our false membrane never becomes black; indeed, it is paler after than before death."

According to Dr. W. G. Dyas (*Chicag Med. Jour.*, Oct. 1859 to March, 1860), there are at least four distinct forms under which the disease may appear:

1. "It may destroy life in a few hours. by a violent and deep impression on the nervous centres, attended by congestion of the internal organs; in this form we may not be able to witness the pseudo membranous exudation, supposed to be pathognomonic of it. "There may be, corresponding to occasional violent cases of scarlet fever, "a deadly pallor of the surface, a dusky hue of the countenance, and particularly of the lips, a soft, irregular pulse, tongue moist and livid, pupils dilated, drowsiness, urine limpid, often suppressed; no complaint of local pain, and an air of indifference when roused from stupor. In such cases death will take place within four hours. This form of diphtheria is rare."

2. Another form, scarcely less malignant, is more frequently met with. "The subject of it, generally a child,

perhaps retires to rest apparently in good health. In the middle of the night, or rather towards morning, it awakes with a sense of distressing nausea, followed by vomiting of a thin, whitish, glairy fluid. Then there is a purging of something similar, but particularly offensive. The child most probably does not complain of uneasiness in the throat; he is drowsy, and seems disinclined to answer questions. The face is pallid and the expression altered. On examination, we are struck with a shining crimson appearance of the mucus membrane of the fauces. From the velum a tenacious, thin sheet of translucent mucus hangs like a curtain over the base of the tongue, the papillæ of which are tumified, its surface dry, clean and red. The pulse rapid, irregular and compressible. The skin may be warm, though more generally it will be found cool. After a lapse of some hours reaction takes place; and now there is a difficulty of deglutition. Drowsiness is succeeded by delirum; respiration is more frequent. The neck is swollen, hard and tender, chiefly in the parotid and submaxillary regions. The anterior half of the tongue may be clean, but posteriorly it is coated with a thick fur, which sometimes is continued to its tip. The whole of the fauces is covered with a deposit like wash-leather. One or both tonsils swelled; breath offensive; a thin sanies issuing from the nares. There may be epistaxis and bleeding from the gums. At first, the urine is limpid; but should the attack not terminate in death within twenty-four hours, it becomes more colored, and there will be a deposit of lithates; at a later stage it is albuminous, and contains the coloring matter of the blood; petechial spots form on the surface, diarrhœa sets in, or if it has been persistent from beginning, the discharges become altered in appearance being like what we occasionally see towards the close of dysenteric cases: serous, like the washings of flesh, and accompanied by intolerable fætor. The surface grows cold, and either coma, or a tetanic convulsion terminates life, generally within four days. Few cases of this kind

escape; and fortunately is not the usual type of diphtheria, even when malignant."

3. "The malignant form most familiar with practitioners commences with a sense of lassitude preceding a variable amount of fever and slight soreness of throat. The pulse becomes rapid, small and compressible; the tongue is covered with a thick, yellowish dirty-brown coat; the uvula, velum, and pharynx are at first of a dusky red; deglutition is painful and difficult; the neck, about the parotid and submaxillary regions, swells; from the nose distils an acrid humor; the voice changes; the breath grows fetid; the breathing, from mechanical obstruction, is stertorous; there is much thirst, and there may be vomiting. In some hours the erysipelatous hue of the fauces is replaced by a deposition, as if, as Dr. Blount expressed it, a thin layer of piepaste was spread over the parts, the edges being thick and abrupt. The urine is scanty and albuminous; debility increases, and the patient sinks exhausted, often retaining to the last the intellect in its integrity. This is the most frequent mode of accession, progress, and termination of malignant diphtheria, and its duration is generally from eight to ten weeks."

4. "The next variety of the disease is what has been termed croupal. In some epidemics this has been the prevailing type. It does not appear to be attended with the same oppression of the system of those already described. A sense of constriction in the larynx is an early symptom; the accompanying fever generally sthenic in character, though some such cases have not presented, from beginning to end, pyrexia. The false membrane rapidly extends to the respiratory organs; there is a hoarse, barking cough, with occasional paroxysms of suffocation, and death takes place by asphyxia."

5. "The form most frequently appearing in this country is of a more gradual invasion, and commences with symptoms of catarrh; coryza, slight fever, with headache, and a pain in one or both ears, usually usher in the attack. There is some soreness of the throat, without swelling either of the fauces or the glands externally. The appetite is often

scarcely lessened. There may be diminished energy, but not so much as to prevent the patient from attending to his usual pursuits. The fauces, on examination, will present one or more insulated patches of a grayish-white pseudo-membrane, not so defined at the edges, nor bordered with the same distinct redness as in the malignant variety but more shaded off. In this form, which lasts from five to ten days, there may be some albuminuria ; and even after the more prominent sign of the disease shall have passed away, albuminuria may for a variable length of time be presistent, accompanied by an anæmic state of the system."

Dr. J. H. Hollister, Chicago, (*Chicago Med. Exam.*, March, 1860,) attributes the various modifications of the disease to the different physical conditions of those suffering from it. The sthenic form, for instance, presents inflammation of the most decided sthenic character, with remarkably plastic effusion, resulting in the formation of firm and thick false membrane. In one case, this pseudo-plasma was found to be so perfectly developed as to give, after expulsion, a perfect cast of the trachea and bronchial tubes to a great extent. An asthenic case, on the contrary, may be marked by nothing but a croupy cough, continuing, without any other disturbance, for a number of days. The fauces will be found affected by congestion of a passive character, the tonsils much enlarged, and the whole of the mucous membrane in the posterior part of the mouth of a dark, livid color. Slight secretion of mucus ; labored respiration. Soon the affected parts change in appearance, become covered with an abundant sanious discharge, asphyxia developes itself, and the patient sinks in a few days.

Prof. Alonzo Clark, in his lecture on diphtherite, before the College of Physicians and Surgeons, of New York, (*Med. and Surg. Rep.*,) divided "all the modes of invasion peculiar to this affection" under two heads : those in which the *constitutional symptoms* are active from the beginning, and those in which the disease makes its appearance *very insidiously*, and only becomes manifest by the appearance of a

patch of exudation upon one or other of the tonsils, or in the fauces. "In this latter class of cases, the children do not complain of much ill health; yet it is apparent that they do not feel exactly well, and have, as a rule, not much disposition to play:" they may, however, be found in bed amusing themselves with their playthings. Voice full, perhaps a little hoarse; some coughing; slight glandular swelling on the outside of the throat. A little patch of membranous exudation on the fauces, sometimes surrounded by a venous injection. Pulse not very rapid, perhaps 100; countenance a little paler than usual; tongue not particularly covered with any coating, nor dry. In such cases a few cold chills may form the first indication of the disease; the constitutional form commences almost invariably with cold chills; there is high fever, and sometimes vomiting, on the very onset.

"The symptoms of membranous disease," says Dr. B. E. Cotting, of Roxbury, (*Bos. Med. and Surg. Journ.*, Sept. 22, 1859,) "are both constitutional and local. The constitutional may be so severe and so rapidly developed as to destroy life before the local have become a source of danger, or they may be so slight as to be overlooked. The local, also, may have the violence, though not the other characteristics of rapid inflammations, or their existence may even be a matter of doubt until made evident by obstruction, caused by the membrane fully formed. It is a self-limited disease, having its beginning, middle, and ending, as marked and uniform in progress, and as uncontrolled by any means now known, as variola. or any other disease that can be cited. The formation of the membrane (as constant a condition as the eruption in variola) does not always correspond in amount to the severity of the other symptoms, general or local, in this also resembling the diseases alluded to. The membrane may be only a thin film, or it may have the thickness and toughness of moistened parchment; it may cover only a very limited space, or it may occupy the whole mucous surface of the organs attacked. It usually forms grad-

ually, being at first a very thin layer (not unlike the first coat of white paint on a pine board;) then this layer becomes thicker and tougher, day by day, until it reaches its limit. Its progress, so far as it has any, is from above downward; and any deviation from this rule is rather apparent than real. From the outset, however, it generally covers all the surface that it will during the attack, increasing only in density. Its thinness may prevent its being early noticed on parts within sight, though clearly visible at a latter period of the disease. During its formative stage it remains firmly adherent to the mucous tissue beneath it, so that it is impossible to remove it, even by the most careful dissection. As soon as this stage is completed, usually in four or five days, the membrane begins to loosen from its foundation, and soon becomes entirely separated; it then creates sufficient irritation and cough to cause its expulsion. Sometimes it is cast off without observation, while at others, its ejection is attended with convulsive efforts of the greatest severity. If a portion is artificially removed, previous to its natural separation, another forms in its place."

The false membrane exists in all cases of diptheria, affirms Dr. Dyas (l. c.), except in those extremely rare ones wherein the system is at once overwhelmingly oppressed by the attack, and life is extinguished ere time is given for the usual characteristic phenomena to be fully developed. It appears very early, within eight-and-thirty hours from the beginning of the disease, generally on one tonsil, or rather in the sulcus between the anterior pillar and tonsil, like a stain left by nitrate of silver on a mucous surface—a pearl colored spot on a red ground. Sometimes it appears first on the uvula or velum. It extends more or less rapidly, so as often to cover the tonsils, uvula, velum, pharnyx, pillars of the fauces, and base of the tongue, with a continuous layer, in from twenty-four to forty-eight hours. It may pass along the respiratory passages to the bronchial tubes, and even down the œsophagus—according to some, as

far as the cardiac orifice; it has been found following the nasal ducts to the conjunctiva. The mucous membrane of the cheeks and gums, the cutaneous surface, the vulva and the anus may be its seat. Hence the terms faucial, pharyngeal, pharyngo-laryngeal or croupal, laryngo-tracheal, buccal, vulval, cutaneous, pharyngo-cutaneous, laryngo-cutaneous diphtheritis. Several of these forms have happened in the same family nearly at the same time, showing that the distinction is immaterial.

Generally, the thickness of the membrane increases with its area; this, however, varies from the thinnest imaginable pellicle to two or three lines. It may be firm, or a mere diffluent pulp. Sometimes it is in distinct, dull white patches; at others it is confluent. Occasionally it assumes a light buff, yellowish, ash-colored, or even black appearance.

Diptheritis may run its course from begginning to end, to recovery or to death, without a single pyrectic symptom; when fever accompanies it, the type of it is not always the same, although the tendency is usually to the typhoid. In this country the attendant fever has been frequently of an intermittent character, probably in consequence of prevailing malarious influence; if so, the intermittent ought to be considered as a complication, rather than a modification of the original disease.

Among other complications observed are measles, scarlet fever, small-pox, whooping cough, gastric fever, gastro-enteritis, meningitis, and the various diseases of the throat.

Dr. Daviot did not think pharyngeal laryngitis contagious; and Dr. Cotting also asserts to have seen no evidence that the disease in general is contagious. The evidence so far collected, however, leaves no room to doubt the truth of the remark made in the *London Lancet* (April, 1859), that "contagion plays the principal part in the propagation of diphtheria." Diphtheritic matter, ejected from the mouth of the patient and lodging in the nostrils of the attending physician, has subjected the latter to severe diph-

theritic inflammation, spreading to the pharynx, and inducing extreme prostration of the whole system. Quite a number of similar cases are on record. A boy using a bath in which a diphtheritic patient had been previously, contracted the cutaneous form of the disease. If the morbid matter happens to come in contact with an abraded or wounded part of the skin, the characteristic membrane will arise from that spot, inducing also the usual constitutional symptoms, and frequently the affection of the fauces.

There are still some other phases of this singular disease to be considered. Even if the patient has recovered from the immediate effects of the attack, and appears completely convalescent, he may, in several weeks, sink and die without any further well developed symptoms. Latent pneumonia is frequently discovered in the dead body. Amaurosis, strabismus, and presbyopia have been observed as consequences of diphtheritis; but one of its most common sequelæ is paralysis, either partial or general. Two, three weeks, or a month after all traces of the original complaint have disappeared, symptoms of anæmia manifest themselves, and slowly paralytic affactions are developed. The first is usually confined to the soft palate, or tongue, characterized by a difficulty of deglution, and a nasal speech; but this may be wanting. If present, it gives way to more general nervous accidents, sometimes increasing to delirium and convulsions (which must not be confounded with the same symptoms attending the more malignant forms of the disease). But these constitute rather an exception: in most of the cases tending to paralysis, a sense of numbness follows, in one or both arms, the neck or the lower extremities. There may also be vague pains in the back and elsewhere. Now the strength fails gradually; walking becomes more and more painful, until the upright position is impossible. The upper extremities partake in this weakness, the head sinks on the chest, etc. According to Trousseau, the same alternations may be present as in purely nervous affections: the numbness changing from one hand to the other, or the paralysis attacking

the legs alternately. In all cases there is an evident affection of the spinal system. Numbness of the cheeks and nose, or distortions of the face, defective articulation, strabismus, paralysis of the bladder and rectum sometimes supervene, There is no fever, a small pulse, but often a tumultuous action of the heart, with anæmic murmurs. The intellect remains intact, although the mental powers are depressed. Dr. Faure, of Paris, adds that during this paralytic affection sensation is diminished, and sometimes entirely lost, or replaced by formication. In some, sundry parts of the body become œdematous, in others gangrenous; others again are subjected to repeated faintings. If this condition terminates favorably, recovery is very slow, occupying from two to eight months.

Dr. Cooper, of the *San Francisco Med. Press*, (Jan. 1860,) saw many of his patients die suddenly from pyæmia, after recovering sufficiently from attacks of diphtheritis to walk about. In these cases the pulse never rose to the normal standard, and the skin remained colder than natural.

The diagnosis of diphtheritis must be based principally upon the patch-like aplastic exudation, accompanied by marked prostration, and spreading, particularly downwards. Some authors also mention a peculiar "muffled sound of respiration"; with Dr. Cotting this is the principal diagnostic sound. In his words; "It is very difficult to describe the sound. It can only be learnt by attentive and frequent observations; yet it is more reliable, and therefore more valuable, than all other diagnostic signs. Once in a while it can be detected before any other indication of the disease is manifested—say in the first two or three hours." The absence of the membrane within sight, is not always a sufficient evidence that the disease is not present. In such cases, the general condition of the patient, the frequent and feble pulse, and the *genius epidemicus* must be our guides. It is then that the sound so much relied on by Cotting may also prove a valuable symptom.

It cannot be difficult to distinguish diphtheritis and scar-

let fever, or putrid sore-throat, as there is no eruption, nor ulceration and sloughing in our disease; or at least the latter but rarely. More important is the diagnosis between diphtheritis and croup; Bretonneau, Duche, Guernsant, Baird, Barthez, Billet, Johnstone, and others defending their identity, and simply designating croup as laryngeal or tracheal diphtheritis, or declaring both to be the same disease, only affecting different portions of the same mucous membrane. But diphtheritis is essentially an asthenic disease, affecting the whole system, thus producing a series of constitutional symptoms; it is epidemic and contagious, while croup lacks all these attributes, being only an inflammatory local affection. In croup there is never the swelling of the lymphatics of the neck, which is a constant attendant upon diphtheritis, and the pseudo membrane itself sufficiently separates the two diseases: the origin from patches, the aplastic nature and its spreading far beyond the air passages, which become affected merely by confluence, are found only in diphtheritis. Croup is, further almost exclusively confined to children, whereas diphtheritis attacks indiscriminately children, adolescents, and adults. Croup is never followed by paralysis, and kills only in one way—by suffocation; diphtheritis may end in the same manner, but it also induces death by asthenia, and months after the disappearance of all exudation, by its effects on the nervous system.

In regard to the prognosis, Dr. D. Wooster thinks the mild variety, or simple-form of the disease (confined to the fauces,) is easily controlled; but the severe form (combined with constitutional symptoms and extensive exudation,) only with difficulty, giving an extremely unfavorable prognosis, even at the beginning. The gravity of the prognosis in general may be said to be in proportion to the suddenness of invasion, and the signs of congestion. Good symptoms are: the false membrane ceasing to extend, and detaching themselves in shreds; slight febrile symptoms;

absence of stupor; an unaffected pulse; a soft and moderately warm surface; expression not altered; unchanged color of face and lips; neck and papillæ of the tongue not swollen; no œdema of the fauces. In no disease, however, is amendment more fallacious: we cannot, either from a particular sign or assemblage of symptoms, calculate with some approximation at certainty what the termination may be. The disease may have commenced without any indication of particular danger, may develop itself in an apparently mild form; and there may even be a manifest improvement in every symptom, the little sufferer perhaps sitting up, smiling, eating, drinking, amusing himself; sudenly croupy symptoms supervene, or re-appear, to end only with life. The disease has extended from the pharynx to the respiratory passages, and death is the result of asphyxia. This may also be produced without affection of the larynx, either by the swollen condition of the fauces, tonsils, and cervical glands, in combination with obstruction of the nares and altered innervation, or by a congested state of the lungs frequently accompanying the malignant forms.

Nausea and vomiting, or convulsions in the beginning of the disease, a rapid extension of the exudation to the posterior nares, a sense of constriction in the larynx, disagreeable odor of the breath, a croupy sound of the respiration, great enlargement of the cervical glands, are among the symptoms of fatal significance.

Life may be destroyed even after the whole membrane has been thrown off. The excessive and unremitting exertions in breathing, caused by the obstruction offered to free respiration, as well as the intense constitutional disturbance, are apt to exhaust the vital power, without suffocation. Complications generally tend to produce an equally fatal result. The superseding paralysis is frequently but not always removed by proper treatment.

On the whole, the disease is, as Dr. Wooster says, one of the most decidedly fatal ones. The chance for a favorable re

covery among children is about one in three, according to Dr. Cotting; Dr. A. S. Clare thinks nine out of ten cases will recover, even with the malignant form, under an appropriate treatment. Admitting the influence of the curative means employed, there is still a formidable mortality unavoidably connected with the disase, though the number of deaths varies during different epidemics.

The post mortem examinations usually reveal a deep red or livid appearance of the mucous membrane of the palate, pharynx and adjacent parts, more or less extensive. In most cases the palate, tonsils, upper part of pharynx, epiglottis, bronchial tubes, sometimes the internal surface of the œsophagus, the pituitary membrane, or some of these parts, perhaps the trachea alone, are found invested with false membrane. Seldom gangrene or ulceration is manifest. The lungs may exhibit patches of hepatization or purulent infiltration; and there may be more or less congestion elsewhere. Occasionally blood is seen extravasated in the muscular tissue of the heart, and the kidneys often bear the marks of the disease. The viscera are often dotted over with petechial spots.

Dr. A. Jacobi, of New York, declares the diptheritic membrane homogeneous in structure to the pseudo-plasma of croup; but this seems to be a mistake. The great difference between them is, that the diphtheritic exudation appears to be incapable of organization, and never tends to organic union with the subjacent tissues. Dr. Cotting describes it as of a peculiar structure: "a tissue of elastic fibres longitudinally arranged, the fibres smooth, and in no way transversely striated. Great elasticity is one of its characteristics."

Dr. Laycock found a parasitic fungus (oidium albicans) in this membrane, and supposed, therefore, that the disease originated from the parasite; but its presence is thought to be merely accidental.

The nature of diphtheritis is not entirely clear. It is now pretty generally admitted to be a constitutional affec-

tion, of an asthenic character, with prominent and local manifestations, principally in the throat, resulting in the exudation of an inorganic pseudo membrane. The disease is the result of a distinct influence (diphtheritic miasm,) contaminating the blood, or infecting the whole system with morbid poison. The conjecture of Dr. Days, who considers a morbid impression on the par vagum as one of the principal features of diphtheritis, needs confirmation.

In accordance with this view, the therapeutical indications are the elimination or neutralization of the offensive matter, whatever it may be, the correction and mitigation of the local symptoms, and the support of the system, where necessary. Consequently, a general or constitutional and local treatment is required, with strict dietetic measures.

Daviot, Meigs and others have practised general and local bleeding, not without success; the general character of the disease, during the last three years, and especially on this continent, has been such as to forbid blood-letting in any form, and is at present looked upon as inadmissible. The croupal form predominating at the time of Bretonneau, seemed to offer an indication not now appearing. The same may be said of mercury, in spite of the many advocates calomel has found up to this day. Whenever the complaint extended to the larynx and trachea, Bretonneau placed his chief reliance on calomel, in three grain doses every hour, repeated every three hours. The most extensive use is made of it by Dr. I. Meranda, of New Carlisle, Ohio, (*Cin. Lancet and Obs.* March, 1860.) To the strong, the robust, the plethoric patient, and in cases distinguished by high arterial excitement, he prescribes it with jalap in full purgative doses, following with the usual remedies against high febrile action. To those of a feeble constitution, or where marks of prostration are apparent, he gives calomel in alterative doses, conjoined with opium and ipecacuanha, or with camphorated Dover's powder, until there is an evacuation of green stools. When croupal symptoms supervene, calomel in small but often repeated doses is Dr. Me-

randa's remedy; and in some chronic cases he maintains to have observed the happiest effects follow a moderate salivaton. In a case detailed by Prof. Hollister, (*Chic. Med. Exam.*, Feb. 1860,) powders of calomel and ipecacuanha play also a prominent part.

Daviot, however, who wrote one of his best monographs on diphtheritis, looks on calomel as useless in pharyngeal, but particularly serviceable in the cutaneous variety. Dr. Briggs, of Virginia, and Dr. Anderson, of New York, admit it in small doses, two or three grains, the last named in combination with prepared chalk, in slight cases; while Dr. G. W. Claiborne (*Va. Med. Journ.*, Oct. 1859) declares it to be a good remedy to commence the treatment with and prepare the organism for a tonic course, where "a foul tongue and offensive breath indicate disordered secretions of the primæ viæ." In the opinion of Prof. Alonzo Clark, "the application of dry calomel to the ulcerations of the throat is of decided benefit; but the administration of mercury, with a view of obtaining its constitutional effects, is a doubtful expedient." A similar practice of Dr. Bigelow will be mentioned hereafter. By far the most practitioners think rather unfavorable of mercurials in diphtheritis; and its inefficacy in many cases has been clearly proven. Even as an evacuant, the propriety of administering it in diphtheritis is at best questionable.

The recommendation of cathartics is very limited, Dr. A. S. Clark (*Ohio Med. and Surg. Journ.*, May 1860,) being almost the only one who insists on their use. In mild cases he orders a dose of sulphate of magnesia, or some other saline cathartic; but in cases of high fever, where "an active cathartic" is wanted, "that will stimulate the secretions, and at the same time not depress the vital powers," calomel is given together with ipecacuanha, carbonate of ammonia, and soda, followed, if necessary, with Rochelle salts, or any other saline cathartics. The drastic cathartics are universally objected to. Dr. S. M. Bigelow, of Paris, in his excellent letter on diphtheritis addressed to Prof.

Warren Stone, of Louisiana, (*New Orleans Med. and Surg. Jour.*, Jan. 1860,) mentions the citrate of magnesia, six or eight drachms, to be given every two hours until it operates. Equal, if not better, is the advice of Drs. D. Wooster, of California, (*Pacific Med. and Surg. Journ.*, 1859,) and Wm. L. Wells, of Wisconsin, (*Chic. Med. Exam.* April, 1860:) to select either the mildest laxatives, or employ injections, so as to move the bowels once a day.

"I protest," writes Dr. Bigelow, "in the most serious manner, against the use of emetics in angine couenneuse," and they are certainly never plainly indicated. Nevertheless, they have been pronounced by some occasionally serviceable at the period of invasion of the disease, especially in young children, and when the false membrane extends to the trachea; others, on a more rational basis, will not admit them, except when their mechanical action might assist in detaching the membrane. In either case, neither antimony nor ipecacuanha should be used, on account of their depressing effects. (Wooster's plan, to commence with ipecacuanha in full doses and repeat them for two or three days, seems not to have been followed anywhere.) Drs. Meigs and Pollard used alumn as an emetic, a teaspoonfull mixed with molasses, repeating that dose in the course of ten or twenty minutes, if required. But the turpeth mineral (subsulphate of mercury,) first recommended by Dr. Hubbard of Maine, is now acknowledged as the best emetic in diphtheritis. It never induces catharsis, and is not followed by prostration, while it operates promptly and certainly. Two or three grains may be given to a child of two years every ten or fifteen minutes, until vomiting takes place. Both alum and turpeth mineral are well suited to patients above one year; for smaller children perhaps some preparation of squill would be preferable (Dr. Dyas.)

The most prominent amongst the remedies employed as directly counteracting the morbid influence is the chlorate of potash, or combined with hydrochloric acid, iron and ether. Dr. Bigelow administers every three hours ten

grains of the chlorate and ten grains of the bichlorate, in some convenient vehicle, giving at the same time one-tenth of a grain of calonel with sugar, to be put dry on the tongue, once in one or two hours or less frequent, sometimes omitting the calomel altogether for awhile, according to circumstances. Chlorate of potash witn hydrochloric acid has been recommended by Dr. Kingsford (*Lancet*, Jan. 1859); Dr. I. Meranda proscribes two drachms of the chlorate with one fluid drachm of hydrochloric acid in eight fluid ounces of water, half an ounce to be taken every three hours. This formula was originally given by Dr. Lamden (*Lancet*, Nov. 1858), it contains free chlorine in solution. The chlorate and quinine in full doses constitute the treatment of Dr. Barker, of New York. Dr. Jacobi gives from a half to one drachm per day to a child from six months to four years old, three drachms to those above that age, continuing for weeks and even months. He usually adds iron, the muriatic tincture in preference. Finding in severe cases the chlorate to operate too severely alone, he also combines it or precedes it with a few large doses of quinine. The best form, in his judgment, is the solution in water with the addition of some acid, generally the muriatic. Dr. A. S. Clark approves of the free use of the chlorate of potash and sesquichloride of iron in tincture, diluted with nitrous ether, but he prefers the following formula: chlorate of potash, one ounce; syrup of lemons, water, of each four ounces; sulphate of morphine, two grains. Take a tablespoonfull every four or five hours.

In Wisconsin, the tincture of the sesquichloride of iron, the hydrochloric acid and the chlorate of potash were given together in a covenient vehicle, or alternately full doses. Sometimes the tincture of iron cannot be borne for many days; then the sulphate of quinine with citrate iron ought to be substiiuted (Dr. Wm. I. Wells). The "Lancet Commission," placed the most reliance in a mixture of sesquichloride of iron with chlorate of potash, chloric ether and hydrochloric acid, sweetened with syrup. The chlorate may also be given after the method of Dr. Gardner, of

New York, in a syrup saturated with it, a teaspoonful in four hours, alternately with three drops of perchloride of iron in syrup. Nothing else is required in cases without local affection.

But notwithstanding this general adoption of the chlorate of potash, some doubts in regard to its efficacy have been expressed, especially by American practitioners. Prof. Alonzo Clark says it is not, as claimed, a specific in this disease, but still of some benefit, and should therefore form a part of the treatment. In the able article of Dr. Dyas, occurs the following passage: "It is very much a matter of conjecture how chlorate of potash acts on the human organism, and on the whole it is doubtful if it possesses a great deal of therapeutic value in diphtheria. It may be prescribed in combination with some bitter infusion (cascarilla, gentian, or bark,) in doses of from ten to thirty grains, according to age." Most summarily Dr. Wooster disposes of it: he believes the chlorate of potash harmless, but of unproved efficacy, simply mitigating the fætor of expiration.

The declining reputation of this remedy is apparently to be transferred to the muriate and sesquichloride of iron, heretofore only employed as adjuvants and tonics. In the latter quality, Dyas speaks of Thompson's bitter wine of iron, containing one grain of Wetherell's precipitated extract of bark and two grains of citrate of iron in a teaspoonful of cherry wine; but some prefer the tincture of the sesquichloride of iron, "ten or fifteen drops every third or fourth hour." Dr. F. Isnard warmly recommends (*Gaz. des Hop.: Amer. Med. Monthly*, March, 1860,) the perchloride of iron as specific against croup and diphtheritis. It should be administered as soon as possible, in large doses, and continued at all stages of the disease. Dr. Th. Heckstall Smith, (*Braithwaite's Retrospect*, Jan. 1860,) while relying chiefly on gallic acid, found the sesquichloride of iron tincture far superior to anything; and Dr. W. H. Ranking (*Ranking's Abstract*, No. 29,) confirms the value of this tinc-

ture as an internal remedy in diphtheritis. If so, the treatment of this disease would be materially simplified; in most of the present methods too many remedies are administered promiscuously.

In a monograph on scarlatina and diphtheria, (London, 1859,) which he considers as one and the same thing, Dr. George Hull praises the sesqui-carbonate of ammonia as a specific, in doses from two to ten grains, every two, three or four hours. Baron treated before him (*Gaz. de Paris*, 5 1856,) diphtheritis with Vichy water and bicarbonate of soda.

A composition called "ferruginated cod-liver oil," has been proposed by Dr. D. Wooster, two fluid drachms with one of brandy, to be taken four or five times a day, or oftener, if the stomach will bear it.

To meet the second indication, a large number of topical applications have been employed, without due consideration of the question, how far, if ever, it was practicable or necessary to remove the false membrane. Dr. Bigelow always removes, with a long forceps, or by scraping, or by any other means, violent or gentle all accessible portions of it. Dr. Cotting, on the other hand, found that harsh attempts by emetics, probangs and the like, to dislodge the membrane before its natural separation, are often accompanied by fearful risks; and could it be affected, it would involve a re-formation, more to be dreaded in the exhausted state of the patient than its first appearing. Dr. Wells also removes the membrane with the forceps, where it can be done, which is rarely the case.

Nitrate of silver in the solid stick, when practicable, or more commonly in strong solution, has been applied most extensively to the throat. Many are of the opinion that it could not be superseded by any other local application; such an assertion, however, will not hold good everywhere. The application in substance is stated to have had occasionally the most serious consequences. Twenty, thirty, forty, sixty grains to an ounce of water have been employed, in the be-

ginning as well as in the more advanced stages of the disease. Prof. Alonzo Clark and Dr. Jacobi, considering the application of the caustic to the membrane itself of no special service, only apply it to the parts immediately around the exudation, so as to prevent the inflammation from spreading, and limit thus the further extension of the membrane.

Bretonneau principally depended on the energetic application of concentrated muriatic acid. It has been employed by others, diluted or not, in very young children mixed with an equal quantity of honey. Equal parts of hydrochloric acid and tinc. of myrrh, says Dr. Beardsley, detached the pseudo-membrane most readily, and diminished the liability of its being renewed.

A strong solution of sulphate of copper (one drachm to one ounce of water) may also be applied topically. Used in the same manner, some preparations of iron have been found equally useful. The concentrated solution of the perchloride, or Monsell's salt in powder, or the tincture of the sesquichloride, are declared by Wooster, Wells, Beardsley, Byas, A. S. Clark and others, to be the most efficacious and valuable of all topical applications.

Dr. J. J. Morgan expresses a great predilection for a saturated solution of acetate of lead (adding one grain of morphine to the ounce,) as a gargle and to be applied with a sponge, two or three times in twenty-four hours. At least he commences with it in every instance, and if the disease advances in spite of it, he substitutes the lunar caustic in solution.

Tannin has not been tried sufficiently. Dr. Heighway, of Cincinnati, dissolved two drachms of it in one pint of glycerine, and applied that solution by means of a probang, with good effect. Tannin may also be used alone.

Particularly destructive to the exudation is sulphurous acid (Dr. Heighway, Prof, Comegys); it is best used in the form of a salt, as the hyposulphide of soda.

Dulmont found (*Gaz. des Hop.*, 47, 1856,) nitrate of silver and muriatic acid sufficient, but lemon-juice, painted

over, a good application; Homotte added a little alum. Tincture of iodine has been tried about the same time, without giving satisfaction. Upon experiments made by him, Ozanam based in the same year, the conclusion that all pseudo-membranous productions are best destroyed by the alkalies and muriatic acid, and soonest removed by bromine and bromide of potash. Thereupon he recommended this bromide or bromine-water against diphtheritis, croup and similar affections; but this proposition seems to have met with no favor.

An idea of Dr. A. S. Clark deserves a trial: he thinks glycerine may be employed, in advanced states, between the caustic applications, for its lubricating as well as for its solvent powers.

Strong nitric acid, applied by means of a brush, is the remedy of Prof. Comegys, when there are deep and extensive ulcerations.

Baudelocque used a decoction of bark with chloride of soda as a gargle; Wooster also mentions the solution of chloride of sodium, and Dr. Wells asserts that gargles with chloride of soda and chlorate of potash act undoubtedly as a solvent of the membrane. Dr. Roche (*Union Medicale*, No. 88; *N. A. Medico-Chir. Rev.*, Nov. 1859,) was very successful with injections containing chloride of sodium. He practices an almost continuous irrigation of the throat, by means of Equisier's irrigator, considering the irrigation the principal curative agent, and therefore employing indifferently solutions containing salt, alum, or the chlorates.

In mild cases alum gargles as the only local application have proved sufficient. Gargles with alum and red-oak bark are proposed for severe cases; but tanin and alum seem to be useless, at least in Dr. Well's experience. Baudelocque applied powdered alum to the nostrils by means of a souffloir; Daviot thought it useful only in the early stage of the affection.

A method mentioned by Dr. Perron (*L' Union*, 53, 1856,) has been revived and modified by Dr. Bigelow. Perron

blew alum and sulphate of zinc into the mouth several times a day, using afterwards gargles with alum. Bigelow commences his treatment with an insufflation of one drachm of powdered burnt alum, and repeats that operation as long as a tendency to the formation of the false membrane continues, alternating in the later time with tannin.

When, after a few days, the fauces become so exceedingly sensitive as to give great pain, Dr. G. W. Claiborne (*Virginia Med. Journal.*, Oct. 1859,) used with good success a wash of borax, honey and myrrh.

Dr. I. S. Briston prefers locally in all cases the employment of mild detergent gargles (*Braithwaite's Retrospect*, Jan. 1860.)

A gentle stimulant, in the form of a mild lotion, say eight grains of iodide of zinc to an ounce of water, is, in the opinion of Dr. W. Judkins, of Cincinati, all the topical treatment required.

Dr. S. Cartwright employs a local application of his own invention, and expresses himself well satisfied with it, (*N. O. Med. and Surg. Journ.*, Nov. 1859). He infuses for several days in one pint of diluted alcohol, finely powdered hydrastis root and the powdered bark of the root of the myrica cerifera, of each one ounce; three ounces of gum myrrh, and two drachms of capsicum. "A piece of wool or cotton (this is better), fastened to a probang, saturated in the above tincture, is the best thing I have ever found to swab the throat with."

Where the running from the nose is very excessive and offensive, a solution of chlorate of potash, or better of chlorate of soda (Dr. Jacobi), or Labarraque's solution (Dr. Thomas, of New York), may be injected through the nostrils.

Fumigating the throat with boiling water and vinegar poured on catnip, and Labarraque's solution of chloride of soda added, is a method practised by Dr. G. Buck, of New York. In two cases treated by Dr. Bibbins, of the same location, inhaling the vapor of warm water seemed to benefit

the patient most. Prof. Comegys testifies to the beneficial effect of inhalations of one ounce of sulphuric ether with two drachms of tannic acid, a cloth being wetted with the solution and placed in the mouth.

The opinions of the profession divided in nearly everything connected with diphtheritis, are most decidedly opposed to each other in reference to external applications. Daviot, for instance, admits rubefacients; Wooster exhorts us never to use liniments or mustard, because they increase the anguish of the patient and do not mitigate the affection. Baudelocque applied blisters to the thigh; Daviot objects to blisters in general as having the serious inconvenience of adding cutaneous to pharyngeal diphtheritis, and Meranda, who has but little confidence in external applications to the throat, informs us that blisters are especially hurtful. Dr. Beardsley experienced no satisfactory results from external revulsives, and Dr. White of Cincinati, declares all external applications in the form of liniments, tincture of iodine, poultices, etc., of no benefit. According to Wooster's directions, in the first stage, while the engorgement is red and hot, cold wet compresses should be applied to the neck; further along, when the engorgement of the throat becomes œdematous, warm fomentations. Dr. G. Hull orders the outside of the neck and throat to be well rubbed with a strong embrocation of ammonia, camphor and opium. A more extensive course is followed by Dr. A. S. Clark, who carries the thing almost too far: he advocates sinapisms to the legs, feet, hands and arms, external stimulants to the neck, and as the disease advances, fomentations of hops, poultices, etc.

Instead of all these annoying and troublesome appliances, Dr. S. M. Bigelew puts his patients from the beginning into a tepid bath of one or two hours' duration, and has that repeated every two or three days.

There is another feature in the rational treatment of diphtheritis which claims particular attention. The system is to be supported by a free, energetic and persistent tonic

or sustaining constitutional treatment, besides the exhibition of general and local remedies as already specified. All authors agree that a vigorous course, with tonics and stimulants, is an imperative requirement. Therefore the most generous diet: strong beef-tea, mutton-broth, chicken soup, eggs, wine, brandy, and "whatever other form of nutriment the ingenuity of the surgeon, or fancy of the patient may suggest" (Lancet Commission). "We urged," relates Dr. Wells, "and in some cases forced patients to take nourishment, notwithstanding the loss of appetite, amounting in some instances to a disgust for food." Where a sufficient amount of nourishment cannot be swallowed, it must be supplied by injections.

Among the remedies proper, turpentine, camphor, carbonate of ammonia, Peruvian bark, but especially the tinctures of iron and quinine, in doses adapted to the age and condition of the patient, are usually selected, Quinine, with a mineral acid and a little lemon syrup, (Dr. Claiborne,) is a very desirable preparation. Sometimes, however, there seems to be some contraindication to the exhibition of quinine. "When the tongue is foul and the stomach irritable, it is better to withhold or suspend it. Loss of appetite, soft compressible pulse, tremulous tongue, languor and subdued expression are indications for its exhibition," (Dr. Dyas.) A most comprehensive and impressive description of this part of the treatment is furnished by Dr. Bigelow. He says:

"I commence immediately with the use of tonics, stimulants, and the most nourishing possible fluid animal food. Quinine every three hours in as large doses as can be borne; bitters composed of cinchona, columbo, chamomile, quassia, bitter orange peel, etc., formed into a strong infusion, to which I add brandy and a little syrup:

℞—Cortex cinchonæ flavæ cont.,
Radix gentianæ cont., *aa* ʒ ij.
Radix Columbæ cont., ʒ ss.
Cortex aurantii,
Flores anthemidis,
Quassia amara, *aa* ʒ ij.
Aqua bulliens, O. ij. M., fiat infusum;
Adde: Spiritus vini Gallici, ʒ vj.
Syrupus aurantii corticis, ʒ iv.

"D. S. To an adult, one-half to two-thirds of an ounce five or six times in twenty-four hours.

"Strong bouillon of beef, mutton and chicken cooked together, with tapioca or vermicelli as a change, a teacupful every three or four hours, occasionally with a boiled egg. Ale, porter, sherry, brandy and water in such quantities as may be borne. During recovery I add to our already nourishing fluid diet, solids, such as beef-steaks, roast-beef, mutton-chops, poultry, game, vegetables, etc. Throughout the whole course of the disease I give an abundance of such fruits as peaches, grapes, apricots, cherries, currents, raspberries, strawberries. Lemonade and morsels of ice as beverage, or soda-water and syrup of raspberries, currants, and gooseberries."

A constant supply of fresh air must not be overlooked, nor that all-important care, with the whole train of minor services, usually included in the phrase "*good nursing.*"

A few peculiar methods of treatment remain to be noticed.

During the epidemic in Augusta, in 1858, Dr. Campbell, observing that the accompanying fever was paroxysmal in character, adopted an anti-periodic medication, which proved more successful than the method previously employed.

Dr. C. Swaby Smith, of Burbage, (*Braithw. Retros.*, Jan. 1860,) commences with the application of a strong solution of chlorinated soda to the fauces, and a sinapism to the throat. A gargle, containing two ounces of a solution of chlorinated soda, two drachms of the tinct. of myrrh, and six ounces of water, is to be used every half hour. Where

the children are too young to gargle, the throat may be frequently washed with the same mixture by means of a piece of a sponge. Internally: chlorate of potash, two drachms; dilute nitric acid two drachms; Battery's solution of cinchona, one drachm; water, six ounces. About the sixth part (varying according to the patient's age,) to be taken every two hours. If there is much pain in the limbs, a few minims of the tincture of colchicum are added, which addition has proved highly advantageous. The diet to consist of strong beef-tea, port-wine, and all the nourishment the patient can take.

Dr. G. Bottomley, of Croydon, describes (*Braithw. Retrospect*, Jan.,) his plan for children as follows:

℞—Solutionis chlorini,
Syrupi simplicis, *aa* ʒ ss.
Aquæ distillatæ, q. s. ad ʒ vj.
M., fiat gargarisma sæpe utendum.

℞—Solutionis chlorini, gtt. iv.
Syrupi aurantis, ʒ j.
Aquæ distillatæ, q. s. ad ʒ ss.
M., fiat haustus, secunda quaque hora sumendus.

The dose is increased according to age. Calomel in one grain doses and more. Diet: concentrated jellies, strong beef-tea, wine, etc.

Dr. J. C. S. Jennings, of Malinesburg, (*Braithw.*, Jan.,) has adopted rather a rough treatment, and institutes it invariably in all cases, regardless of sex, age or incubation of disease. First, an active emetic of antimonial wine, from half an ounce to an ounce, according to age: then free cauterization of the throat with solid nitrate of silver; mustard-poultice from ear to ear; the feet and legs plunged into a hot bath, and the patient confined to bed. After the operation of the emetic, a cathartic of calomel and compound extract of colocynth; four hours afterwards this mixture:

℞—Quiniæ disulph., ʒ ss.
Potassæ chloratis, ʒ j.
Acidi hydrochlorici diluti, ℥ ss.
Aquæ, ℥ viij.
M., fiat mistura, cujus sumatur pars, sexta quarta quaque hora

At the same time a gargle of chlorine solution is directed to be prepared frequently, by saturating water with the proto-oxide of chlorine, generated from two parts of chlorate of potass., one of hydrochloric acid, and one of water. The fauces are to be sponged out with this quite frequently.

Greatly at variance with all others is the method detailed by Dr. B. E. Cotting (*Boston Med. and Surg. Journ.*). While disapproving bleeding, leeches, cupping, blisters, sinapisms, mercurial and drastic purgatives, emetics, cauterizations, he restricts the therapeutical applications to almost nothing. "Mild and nutritious diet, including, if possible, such articles as the patient willingly accepts, is to be preferred to abstinence, certainly to a stimulating course. The inhalation of watery vapor, by an inhaler or other practicable expedient, is often, not always, very agreeable; and if it is not very effective, it is at least without objection. A warm fomentation, or, better still, a warm emollient poultice, covering the whole anterior half of the neck, is probably of service. But above all, anodynes, sufficient to subdue restlessness and ensure quietude, are most important agents. The particular form is of little consequence. Dover's powder, or an equivolent containing the strength of a grain of opium and a grain of ipecac. to the ounce, is a very convenient form. The ipecac., however, is not important. Mucilaginous drinks are generally acceptable." From his own statements, it appears that Dr. Cotting was not very happy with this lenient treatment, as old as the history of medicine thought it to be.

Stranger still, but far more successful, appears a plan which Prof. E. S. Cooper adopted (*Boston Med. and Surg. Journ.*, Jan. 5, 1860; *Pacific Med. Journ.*, Jan.), after des-

pairing almost of achieving anything against the fatal disease. With his treatment he lost only one patient out of thirty-one; and this entitles his proposition to a consideration it could hardly otherwise claim, with all its originality. No applications to the throat are used by him. An embrocation of chloroform (three ounces), cod-liver oil (twelve ounces), and spirit of turpentine (two ounces), is applied freely all over the neck, breast and abdomen, upon flannels covered with oil-silk. For internal use he gives this mixture: Ext. glycyrrh., three ounces, acaciæ gum, one ounce; antim. tart., one grain; sacch. alb., two ounces; aquæ, eighteen ounces. Give a wineglassful every two hours to a young child, say two years old, and increase in proportion to age. During this treatment, not a particle of any thing else is allowed,—not a drop of water, nor the least nourishment, save what is in the medicine.

Whatever method may be followed, it seems to be essential to continue both general and local treatment for some days after the disappearance of all morbid symptoms.

Experiments with tracheotomy in diphtheritis have not been wanting. On this continent it has been strongly objected to, and is stated to have never been successful. With Bretonneau it was the last resource; he operated three times, saving one patient. In France the operation has been defended and performed up to the present time. Dr. Bigelow follows Trousseau in recommending it, adding that it must be done earlier than in croup, before the vital powers are too low. A method peculiar to Dr. Bigelow is the insufflation of alum into the pharynx, and as far as manageable into the larynx, through the tracheal tubes, immediately after the operation and according to circumstances.

In conclusion, the sequelæ of diphtheritis ought to come in for their share of the treatment; but the reports are in this regard almost too meagre. Dr. Bigelow merely alludes to iron tonics, a generous diet, cold affusions, warm clothing, and exercise in open air, for the cure of the subsequent paralysis. In slight cases sulphate of zinc and

quinia have proved sufficient. According to Dyas, the blood must be supplied with its normal proportion of hæmatosin; and this is to be effected through the agency of preparations of iron, with a generous and supporting diet, Sulphur baths, electricity, preparations of zinc and valerian, are occasionally valuable auxiliaries. The same treatment will be required for strabismus, presbyopia, and other ailments somtimes following diphtheritis. Dr. Meranda's cure of the first named, by spigelia and calomel (given in consequence of an imagined connexion with worms,) was evidently an accidental occurrence. Jackson's compound syrup of phosphates has been recommended, and Churchill's preparations of the hypophosphites may be still better; but the remedy principally to be relied on, as well as for the general and local treatment of diphtheritis itself, as for all affections following it, is undoubtedly iron.—*Cin. Lancet and Observer.*

TPE TENDENCIES OF THE PRESENT DAY IN REGARD TO THE DOCTRINE OF DEBILITY AND THE TREATMENT OF DISEASE BY STIMULANTS

(From the Philadelphia Medical and Surgical Reporter.)

Dr. Samuel D. Gross introduced the subject for discussion by remarking upon the numerous revolutions in medicine. Change is written everywhere. Each age has its absurdities and inconsistencies. This is natural so long as each one acts as a free agent. Were there no changes there would be no sound progress, and the science would become stagnant.

It requires no prophetic eye to see that we are on the verge of a most fearful revolution in medicine: hence it is proper to pause and inquire, "Watchman, what of the night?"

The tendency of the medical profession at present is to

the abandonment of all active depletory measures and to the employment of stimulants, on the ground that a change has occurred in the type of diseases, and that man is no longer able to bear the former active treatment. Many practitioners even coincide with the late Dr. Todd, of London, in the belief that leeches can never be used with safety.

The inquiries of the present paper will be two: first, has there really been any change in the type of diseases? and secondly, are the people of the present day less capable of resisting active depletion? The endeavor will be to show that both of these views are untenable; that they originate in misconception and superficial observation. The stimulant treatment is not new. We find in the last century, all over Europe, the Brunonian system exercising a powerful sway over the minds of many otherwise enlightened practitioners—some even supposing that in it they had discovered the philosophers stone in the treatment of disease. John Brown, the author of this theory, pretended to have made a stupendous discovery, founded upon his own personal experience. The speaker then gave a brief biography of this remarkable personage, and the progress of his doctrines through England and the Continent, especially in Italy and Germany.

After this brief digression, the lecturer came to the consideration of the two questions proposed.

Is there really a change in the tpye of diseases? and is it true that mankind are unable now to bear depletion when laboring under inflammation as well as in other times? To the first he would reply in the negative. In a practice of upwards of thirty years, he had seen no reason to justify such an opinion. Diseases seem the same now as when he entered upon the practice of medicine. Even in epidemics no change of type seems to have occurred; but in ordinary inflammatory diseases the only changes to which they are liable are dependent upon individual peculiarities, etc. In point of facts, the morbid action is essentially the same, va-

rying in degree but not in character. The same causes which were in operation thirty years ago act now.

Entertaining these convictions, he need scarcely say that the treatment so much insisted on by Bennet, Todd, and others, of all inflammatory affections by stimulants has not only no foundation in truth, but is at direct variance with the best interests of the sick and the reputation of the physician. It is difficult to conceive how any enlightened physician can bring himself to entertain such a belief.

The only safe way to treat disease is to look at every case as making its own laws, which have reference to the exciting cause, the structure involved, the duration of the attack and the prior state of the system. If the stimulant school see nothing but reduced action or depressed vital power, it proves pretty conclusively one of three things: that they are incapable of making accurate observation, that they are blinded by prejudice, or that they have to deal with a class of patients whose habits and conditions are such as to forbid the employment of any other method of cure. The first two we cannot believe, and we therefore come to the conclusion that these gentlemen deal only with depraved, worn-out constitutions. But here we are at fault; such an idea would be absurd—they must certainly encounter occasionally a stout, robust patient. Nor can it be the stage of the disease at the time of their arrival on the scene. Fashion, all are aware, has its influence in medicine as well as dress. John Brown, a dissolute doctor, became the leader of a new sect in medicine which retained its supremacy for nearly a quarter of a century—its sole basis being the relief which he experienced from alcoholic potations and laudnam when suffering with the gout. Unity of disease and the lancet were the great weapons of Rush. Purgatives ruled at the time of Hamilton. Dyspepsia, disease of the liver, etc., each had their turn as the fashionable disease. At present, every thing is a change of type in disease, and stimuli are the remedies; bleed the patient and he dies; purge him actively, and if he recovers it will be very slowly. Just

now the peculiar pathology of Virchow is coming into notice, and seems destined to enslave to a great extent the medical mind. Although most medical men, as well as the community at large, at present regard blood-letting with terror, yet it has been beneficially employed millions of times. No doubt it has been abused. We can hardly reconcile with our notions of propriety the loss of *two*, much less of *three hundred* ounces of blood in the course of a few days for the cure of an idiopathic or traumatic inflammation, and yet such cases are easily found of a well authenticated character in the annals of surgery.

Dr. Francis, of New York, distinguished alike as a skilful practitioner and an accomplished scholar, is a living monument of this heroic treatment. In a violent attack of croup, he lost in a few days, nearly three hundred ounces of blood. Physick, in an attack of yellow fever, in 1787, was bled to the amount of one hundred and seventy-six ounces. No one at the present day would dare to follow such an example. It is no longer the fashion; the lancet grows rusty in its case, and the cutler has almost ceased to manufacture it. Even the occupation of the leecher is almost gone. When a student in this city, thirty-two years ago, it was common, in an attack of acute pleuritis, to bleed the patient three or four times, and sometimes even that often a day—the same orifice being repeatedly opened for that purpose.

If we inquire into the causes of these revolutions, we shall find them not in a change of type, or in the powers of the system, to withstand the effects of inflammation, but in a greatly enlarged knowledge of remedies and of their application to the cure of diseases. The use of quinia and morphia is now much better understood than formerly, and the antiphlogistic virtues of aconite and veratrum viride were entirely unknown until a very recent period. Quinia has become the great remedy in malarial affections; opium is a powerful adjuvant in allaying pain and procuring rest both to the part and the system, and aconite and veratrum

viride exercise so astonishing an influence in controlling arterial action as to render them special favorites with every enlightened practitioner. They have, in fact, taken the place of the lancet, tartar emetic, etc.

Thus we readily see why blood-letting has fallen into desuetude, unmerited certainly; for, spite of all, an early spoliative venesection and the judicious use of the more heroic articles of the materia medica would often do more in saving structure and functions than any of the present popular remedies.

Practitioners are too prone to go to extremes and be led away by specious theories. Losing sight of common sense, and forgetting the teachings of experience, they readily grasp the shadow and forsake the substance. Hence, the discordant views which so constantly agitate our profession, perplexing the public mind, and impairing our influence. Hence the strong-hold which all forms of quackery have taken upon the people.

The past is pregnant with useful lessons. It teaches, on the one hand, the futility of all exclusive systems of medicine, and, on the other, the importance of being governed in our views of pathology and practice by common sense, aided by a chastened experience, which holds fast to the good and useful, and discards that which is hurtful. Its motto is enlightened, unprejudiced conservatism, ever ready to enlarge its boundaries by cautious observation and induction, and resolved to avoid exclusivism in every form. Standing upon this elevated and philosophical platform, rational medicine avails itself of all that is useful in mitigating or curing disease, not disdainieg the lancet, &c., on the one hand, or, on the other, a resource to stimulants.

In conclusion, while proclaiming himself an advocate of an enlightened eclecticism based upon experience, reasoning, and philosophy, he stated emphatically that he was not an advocate of large doses, or of the indiscriminate use of any medicine whatever. A judicious combination of a few well-selected articles, or occasionally the exhibition even of a single substance, united with absolute rest and a proper regu-

lation of the diet, will generally accomplish the object much better, immediately and prospectively than the polypharmacy and heroic treatment so much in vogue in certain quarters only a few years ago. As the practitioner grows older, he almost uniformly gives less medicine, satisfied that he is generally only the assistant of nature, and not her master.

(*To be Continued.*)

DIGITALIS IN THE TREATMENT OF MANIA A POTU.

BY G. C. CATLETT, M. D.

The experience of the Physicians of this City so far as my knowledge extends in the treatment of Mania a Potu, has been very unsatisfactory. Most of the attacks assuming a remarkably acute form; with great violence of delirium, furious mania, and persistent mental aberrations, have generally resisted the opium and stimulating as well as all of the former established methods of treatment for this unfortunate class of sufferers.

So great has been the mortality from this disease during the last four or five years, notwithstanding we have attempted to discriminate between the chronic and the acute forms; that we have become apprehensive that we have not been treating alcoholic poison. Indeed so general has become the impression that the various alcoholic drinks generally used, contain a foreign poison, that those who are in the habit of becoming intoxicated are significantly said to have taken passage on the strychnine line for an unknown destination. While the symptoms of the numerous cases that have come under my observation do not in the slightest resemble those from the poison of Strychnia, yet, the great apparent differences in the character of the symptoms as well as in the result of the disease—produced by excessive use of alcohol—at the present and former periods, that it would very naturally

create apprehension and strike terror to the spiritually infatuated.

There have been a few persons, by a prolonged debauch have induced inflammation of the mucous membrane of the stomach or at least, such a degree of irritability that a continuation of indulgence was impossible, as nothing introduced into it would be retained, soon therefore from the withdrawal of the stimulus, delirium tremens would supervene, characterized by intense hallucinations, great tremulousness, incapacity to sleep, irritability of stomach, tender epigastrium, and deficiency of the secretions. Counter irritations to the epigastrium, a mercurial cathartic, stimulants judiciously administered (I prefer Tinct. Serpentaria; and Tinct. Valerian, equal proportions.) and Morphia *pro re nata*, will generally in my hands relieve such cases. But that form of this disease that is produced by the constant daily use of alcohol long continued, poisoning the blood and resulting in acute mania, is the fatal form, or properly Mania a Potu. In relation to this form of the disease Prof. Stone of New Orleans says:

Brain fever and appoplexy are terms often kindly substituted as being more respectable; but names do not alter facts. Mania a potu usually occurs with the robust who habitually use alcoholic stimulants, but not to any great excess, except upon occasions, and when they are carried to a certain extent, a necessity for their continuance is created, and their excessive use cannot, or will not, be resisted until the stomach gives way and finally rejects them. During this process the mucous membrane becomes engorged, the digestion, and finally the appetite, entirely fail, and the patient is sustained for some days after, by stimulants alone, until furious delirium sets in.

The madness is not due to the stoppage of an accustomed stimulant, for it often sets in while in the full use of it, but it is plainly due to alcoholic poison and the absence of proper nutritive matter in the blood. I think I may add another cause which has often something to do in causing the de-

lirium, and certainly much to do in causing death, under some modes of treatment, and that is suppressed excretions. So long as the stomach is intact, and the appetite and digestion good, an immense quantity of stimulant may be disposed of without serious immediate consequences; but when the organs finally, from constant excitation, become engorged, nutrition ceases, and the alcohol is retained more in the blood, instead of being carried off by excretions, and wild delerium soon follows.

It is plain, under these circumstances, that the indications are to establish the excretions, disgorge the system of the alcoholic poison, and to introduce proper nutriment. The first two are accomplished by one and the same means. The stomach is generally irritable; at least there is frequent vomiting; but it is owing to the accumulation in the stomach of morbid secretion, rather than from inflamation or even irritation; for calomel in small doses, frequently repeated, arrests it with great certainty. If the subject is governable, and will take medicine willingly, colomel should be given in two or three grain doses every hour, or oftener if the case is urgent, until fifteen or twenty grains are given: if medicine has to be given by force, it is best to give a full dose at once; and this is the better, for in the worst cases the stomach is not nauseated, and the sedative effect, of a large dose of calomel calms the nervous excitement, and at the same time produces the appropriate effect upon the excretory organs and mucous coat of the stomach and bowels. It requires some hours for this effect to be produced, and it is improper to give anything to promote its action upon the bowels under ten or twelve hours, and I think even a longer time would be better, if the case is not urgent. Small and frequently repeated doses of saline medicine are the best, after the calomel (sulphate of magnesia is best), which promotes the excretions, disgorges the stomach and bowels, and clears the system of its alcoholic poison, to its great relief. An active cathartic may afford some relief, but the system is not so well disgorged by it; more or less

serum from the blood is carried off, causing weakness ; while, in the other process, by giving time before the action of the calomel, and then promoting it by gentle but continued means, the organs exercise a selection in excreting, and thereby a large amount of effete matter is discharged, and the patient feels the stronger for it, being freed from an incubus that was weighing it down, and producing apparent exhaustion. After this process, we should lose no time in introducing nutriment, and for this purpose milk is most universally applicable ; and as the mucous membrane of the stomach seems to be denued of its epithelium, the addition of lime water renders it particularly grateful and soothing. Patients in this condition generally loath animal substances, but milk is almost always grateful to the taste, and is particularly appropriate for it furnishes the most innocent solid for the bowels, that have been long deprived of their wholesome stimulus, If it should happen that a patient could not take milk, well boiled cornmeal gruel is the next best diet most likely to be relished; and for something more substantial, strong, well-seasoned broth, frozen, will be the most likely to agree.

In all acute cases, alcoholic stimulants should be withheld, for they act like poison and will often bring back delirium. Should stimulants be thought necessary (and it is often really necessary) the carbonate of amonia, or the aromatic spirits of amonia are preferable; or it may be proper, in some cases to allow malt liquor. Opium in all forms should be prohibited, until the system is relieved of its alcohol and even then I find it can generally be omitted; and when it can be, the patient recovers sooner and better. The patient is not expected to sleep well, but if the blood is renewed by its appropriate nutriment, natural sleep will soon follow.

Occasionally, when, previous to the debauch which immediately caused the mania, a free use of stimulants had been indulged in for some time, we have an exalted state of the nervous system, attended with hallucinations and sleep-

lessness, which require special attention. Potent stimulants operate badly, and opium alone does not operate well, though in large doses sleep may be forced, though not without some risk, in some cases, to the brain ; but equal parts of morphia and tart. antimony, given in small and repeated doses, will soon calm the nervous system and induce sleep without injury either to the brain or stomach. There is nothing that cools off the heated imagination in these cases like nauseating doses of tart. antimony; and opium in some form may be added, if it is thought necessary. The too general opinion that sleep is the all-important thing in this disease has led to fatal errers in treatment. Opium, given freely, as it often and very generally is, while the blood is charged with alcohol, produces a very unfavorable effect upon the nervous system, and tends to check the excretions, which are already diminished, and the patient, without being narctized, often goes into a stupid state resembling the effects of urœmic poison ; and if about one-half (about the usual proportion), by the vigor of their constitutions, weather it, in spite of all the poison imposed upon them they recover slowly, and their organs are left in a bad condition."

We make this lengthy extract from Prof. Stone's communication on this subject, because he makes the important distinction between delirium tremens and Mania a Potu, and in his usual clear manner points out the rational treatment in the two forms of the affection. These views we think should be more thoroughly impressed upon the profession. Notwithstanding we are satisfied that the difference in the two forms of alcoholic poison is clear, and the treatment of Dr. Stone is the rational treatment yet, the Mania a Potu that has occurred in this city for the last few years, has been remarkably fatal, and all methods of treatment very unsatisfactory.

Therefore I determined to try the Tict. Digitalis in large doses. Recently, two cases presented an opportunity. The first a man, the second, a woman. A description and treatment of one case will describe both in all essential particulars. Mr. ———, after a debauch of several weeks, and

while yet stimulated to as great a degree as all the varieties of alcoholic drinks could produce; in attempting to light a cigar, fell upon the floor in the most frightful convulsions raving, and foaming at the mouth, and mutilating his lips, tongue, hands and arms with his teeth. In half an hour after this convulsion, he was furiously delirious, recognizing no one, muttering his imaginary fears, and now and then making fearful struggles to escape from his bed, his face almost livid, eyes deeply injected and eyelids greatly swollen, pulse one hundred and sixty, weak and thread like.

In the interval of convulsions, and before my arrival, one half a grain of morphia had been administered to him. I imediately administered five grains of ipecac and two grains tartar emetic, and repeated it every fifteen or twenty minutes, until he had ejected everything from his stomach. This occupied several hours when his symptoms were not in the slighest improved. I then determined to watch the action of the digtalis and commenced by administering a large teaspoonful evry half hour. The first dose improved his pulse; it diminished in frequency and increased in volume. The second dose lessened his ravings and made a more palpable improvement in his pulse. The third dose was increased one half, when all of his symptoms in one hour, were manifestly improving. I then increased the dose and lengthened the time of administration. In about seven hours from the taking of the first dose his pulse was full slow and regular. I then continued the Tinct. Digitalis in small doses and gave a mercurial cathartic. His sleep became sound and tranquil, he awoke in about six hours, sane in mind and almost well in body. The only remaining vestige of disease was extreme nervousness. I then prescribed Tinct. Valerian and compound tincture of cinchona in equal qantities. The second case was almost as severe as the first and was treated in like manner and resulted as favorably. If Digitalis acts by sedation, will not Veratria be a more efficient remedy in Mania a Potu?—*St. Joseph Medical & Surgical Journal.*

AMERICAN DIPLOMAS.

The difficulties which the Medical Council have encountered in resisting the claims of many uneducated and unintelligent persons holding American diplomas in Medicine and Surgery, have evoked the expression of sympathy and shame from the more respectable section of the medical profession across the Atlantic. They avow frankly, that such diplomas are, in a large number of cases, wholly destitute of value. They afford no indication either of intelligence, study, skill, or good conduct. The graduate of an American chartered medical college, or the licentiate of a county or state medical society, may be an educated and accomplished gentleman, or he may be an ignorant quack-salver, destitute of any claim to that title. It is right that this should be widely known, and that we should reflect upon the authentic avowal of a respected American journalist. An American medical contemporary states that the ease with which charters are now obtained from State Legislatures, for every nondescript association of men, whether for proper or improper purposes, has effectually broken down all safeguards to respectability, and thrown the field of Medicine widely open to every species of adventurers. Charters are granted by State Legislatures to any and every body of men, for any and every conceivable purpose, without distinction or reserve. At nearly every session a batch of medical institutions are chartered, embracing every shade of quackery; and these equally with the respectable and legitimate schools of medicine are entitle to confer the degree of M. D., and to represent themselves abroad as universities. It is difficult to imagine a more deplorable state of confusion than such reckless State patronage of ignorance and quackery must produce. Already it threatens to disorganize the educational system of the profession in America; for adventurers are thus freely enabled to purchase that academical status which only education can confer in other countries. The

inevitable result must be, that since we have no means of distinguishing here, amongst the multitude of American colleges, those which apply the necessary tests to their members from those which admit the most unworthy persons, American diplomas will fall into discredit, and will be regarded as of no value. The remedy which it is proposed to apply is of a local character ; and the American Medical Association taking cognizance of this state of things, it may result that the test of respectability which degrees fail to afford will be furnished by admission to that and other associated societies. It is obvious, however. that this voluntary test will have only a partial and local value. Meantime, it would appear that even the most respectable colleges are not free from taint. A protest has been forwarded us, emanating from the Newark Medical Association, N. J. in reference to a diploma granted by the New York Medical College, which has always held a high place amongst the trans-atlantic educational institutions. From the protest and resolutions drawn up by this Association and assented to by others, it appear that the person to whom it was granted was a man who had for years painted and peddled window-shades, and subsequently became a dealer in quack pills and salve ; that he was a grossly ignorant person ; and his "examination, both by the faculty and the censors, must have been conducted in the most unjustifiably careless manner ;" all which is respectfully submitted to the American Medical Association, with sundry suggestions "to remove the reproach cast upon the profession by the conferring of the diploma upon so unworthy a person, and prevent a repetition of similar grievances in all future time." The New York College has refused to revoke the degree. The Medical Association is called upon to enforce the revocation, or to exclude the College from representation at its meetings. This disposition to invoke the influence of the Medical Association as a tribunal of appeal of the highest grade has now become a remarkable feature in the politics of American Medicine. It springs, undoubtedly, from the worthlessness and ineffi-

ciency of a large number of the chartered medical colleges, and is a strong practical comment upon the injurious effect of that reckless distribution of charters, of which the Medical Council is bound to take careful note in the interests of British Medicine.—*London Lancet.*

URTICARIA AS A SYMPTON OF IRRITATION OF THE FEMALE SEXUAL ORGANS.

BY PROFESSOR SCANZONI.

Professor Scanzoni observes that although it has long been known that chronic affections of the female sexual organs are not infrequently accompanied by skin diseases (urticaria, eczema, acne, psoriasis chloasma, etc.,) the influence of a more sudden irritation of these organs upon the cutaneous surface is by no means so well established. He has been enabled to find no very definite statements upon the subject, and this leads him to communicate some cases tending to establish such a consensus.

A lady, aged thirty-five, had been under his care for some time with slight retroflexion of the uterus and chronic metritis, when he ordered four leeches to be applied to the vaginal portion of the cervix uteri. This little operation had been already performed once before without any ill effect, but upon the present occasion, ten minutes after the application had been made, the patient was seized with violent febrile action, and slight delirium. In half an hour she was seen by the author, who found her skin, and especially that of the face and upper part of the body, almost of a scarlet red. The temperature of the surface was considerably raised, and her pulse beat 136. She continued much the same during the night, and when seen next day, the face, neck, chest, arms and thighs exhibited with the intense redness, innumerable urticaria elevations. In a day or two the exanthem had entirely disappeared, a dis-

tinct desquamation, however, taking place on the face and neck. As this was the first case the author had ever seen in which these symptoms followed the application of the leeches to the cervix, he did not believe in their dependence upon this, and again ordered them to be employed. Four times this was done without any unpleasant occurrence, but on the fifth occasion the whole series of symptoms above described were reproduced, and that so rapidly after the biting of the leeches, that any doubt as to cause and effect could no longer be entertained.

In a second case, a woman aged eighteen, was admitted into the Wursburg Midwifery Institution on account of chronic uterine infarctus, and five leeches were ordered to be applied to the cervix. Scarcely had they taken hold, when she complained of the most violent labor-like pains in the abdomen, and although these soon moderated in force, they were accompanied with such intense febrile action that the entire body glowed with heat, the pulse rose to 140, the carotids pulsated visibly, and the face, neck and chest, exhibited an intensely red color, to which were added in a very short time a large eruption of urticaria elevations of a palish color. The eruption was accompanied by great headache, inclination to vomit and excessive lassitude, symptoms which continued to the following day, although the exanthem with the accompanying fever disappeared entirely after three hours' continuance. This patient often had suffered from urticaria at the menstrual periods, without, however, its being accompanied by such violent symptoms.

The third case occurred in the person of a young lady, aged twenty-six, who on account of long-continued chronic oophoritis and metritis, required blood-letting. In the course of sixteen months four or five leeches had been applied eight times. On the ninth occasion, an intense redness covered the skin, and the patient complained of the most violent pain in the head. The temperature of the surface was much raised, and it was almost entirely cover-

ed with innumerable, minute, prominent elevations. In the course of an hour these appearances gradually subsided, the headache continuing for twenty-four hours longer. The author is aware of a fourth case of the same kind, but is unable to furnish the particulars.

Professor Scanzoni believes that these cases deserve the attention of those occupied with the diseases of women, as well as of dermatologists. They admit of no other explanation than the irritation of the uterine nerves, caused by the bite of leeches, induced an entirely unusual, and in its mode of origin inexplicable, disturbance of the vascular system, which again, in a mode which is to us equally unintelligible, gave rise to the production of the eruption of urticaria. In proof that these appearances were not produced as a consequence of any poison being conveyed through the medium of the bite of the leech, it is to be observed that similar symptoms never result from the application of leeches to other regions of the body, while it is to be observed that even very slight irritation of the sexual organs, as that produced by examination with the finger or speculum, or by the application of caustic, will, in many sensitive women, give rise to erythema of the face, neck, breast, etc., which disappears as rapidly as it comes on.—*Wurzburg Medicin. Zeitschrifts*, band i, pp. 90–95.

ON THE USE OF MULLEIN (VERBASCUM THAPSUS) IN CHRONIC BRONCHITIS

BY H. WILSON, M. D., OF BOONSBORO', MARYLAND.

Chronic bronchitis is universally admitted to be one of the most obstinate and difficult affections with which physicians have to deal. This difficulty proceeds more from the locality than the nature of the disease; more from a want of access to the mucous membrane of the bronchiæ, than from the absence of proper remedies to control the

affection. Counter-irritation and the inhalation of chlorine, iodine, and expectorants, with such like means, have been used for centuries, but all physicians know, from experience, that the benefits derived from their use are merely temporary and palliative, and seldom bring about a radical cure; still they are the best remedies which we have at command, and it is but right that we should avail ourselves of their medicinal virtues. The long standing inflammation of the lining membrane of the bronchiæ seems to demand the contact and application of some powerful agent, in order to produce a new impression, and thereby change the morbid action of the part, before a healthy reaction ensues.

* * * * * * *

The frequency with which bronchitis is met among clergymen and others, renders the discovery and use of any means which may be serviceable, either as palliative or curative, a matter of importance. For several years past I have been in the habit of using a remedy, which may not be new, but which far surpasses that of any other which I have tried in relieving, and, in many instances, entirely eradicating the affection. I refer to the leaves of the common mullein, (verbascum thapsus,) dried, and smoked in a pipe. In that form of the disease in which there is a dryness of the trachea, *with a constant desire to clear the throat*, attended with little expectoration and considerable pain in the part affected, the mullein, smoked through a pipe, acts like a charm and affords instant relief. It seems to act as an anodyne in allaying irritation, while it promotes expectoration and removes that glutinous mucus which gathers in the larynx; and at the same time, by some unknown power, completely changes the character of the disease, and, if persevered in, will produce a radical cure.

In no respects are its beneficial effects more striking than in its power of immediately allaying the desire of "clearing the throat," which is a source of constant an-

noyance to the patient, and which is so apt to disturb his rest at night. The remedy needs but to be tried to prove its efficacy.

* * * * * * *

The mullein may be gathered from almost any field at all seasons, and should be first dried, and the leaves smoked in a pipe like tobacco, at least two or three times a day. It is not unpleasant, and, unlike tobacco, requires almost constant smoking or drawing, or the fire will go out.

The remedy is simple and harmless, but potent. It is one of those means which nature has so bountifully supplied, which are within the reach of all, and is but an evidence that we need not report to chemical combination for all our most valuable remedial agents; but if we look around, we may find them at hand ready for application.—*Journal of Materia Medica.*

NEW TEST FOR DIABETES.

Dr. E. C. Bidwell communicates to the Boston *Med. and Surg. Journ.* (Nov. 22, 1860) a process which he claims as a new test for glucosuria. His proposed test, he says, if not preeminently scientific, is nevertheless facile and reliable. He converts the saccharine element of diabetic urine into *caramel*, by heat. Upon a clean slip of tinned iron are placed one or two drops of the suspected material, which is then held over a spirit lamp; the fluid will speedily evaporate, leaving scarcely a trace upon the surface of the metal. The application of the heat is continued, and in a few moments after the completion of desiccation, a spot, about an inch in diameter, over which the drop has spread with the first ebullition, will gradually assume a rich reddish brown color, with a brilliant lustre, having the appearance of Japan lacquer. The application of a stronger heat produces a darker color, but the lustre continues until the intensity of the heat decomposes the substance. Dr. B. claims

great success in his experiments, with this new method, which is far superior to those tests found on either fermentation, or on the reduction of metallic oxides, which latter, besides being complicated and inconvenient for clinical use, are liable to various fallacies.—*N. O. Med. News and Hospital Gazette.*

CHLOROFORM VAPOR IN EAR-ACHE.

The use of oil and chloroform in ear-ache is familiar to many. A recent case treated by Dr. L. D. Ford, of this city, developes the use of chloroform vapor for this affection on a method which proved highly satisfactory. The patient, a child, suffered severely, and other remedies failing. Dr. Ford used the following extemporaneous expedient:

Taking a 2 oz. vial, a small opening was punched through the bottom, a little cotton wool soaked with chloroform was then put into the vial. The mouth of the vial was now applied to the external meatus. The attendant then placing his lips to the punctured extremity of the vial, *blew the vapor into the external ear.* The relief was instantaneous, and the patient soon fell asleep, being cured by this single local application. We commend the above method as well worthy of trial in cases of this painful affection of childhood.—*Southern Med. and Sur. Journal; St. Joseph Med. and Surg. Journ.*

CANNABIS INDICA AS A HYPNOTIC.

Dr. Fronmuller, after a large number of experiments, draws the following resume of the value of this drug.

Of all anæsthetics ever proposed, Indian hemp is the one which produces a narcotism most closely resembling the

natural sleep without causing any extraordinary excitement of the vessels, or any particular suspension of secretions, or without fear of a dangerous reaction, and consecutive paralysis. It acts neither as violently nor as surely as opium. It can be given in all acute inflammatory diseases as well as typhoid affections. It is well adapted as an alternate with opium in case this ceases to act. Its best mode of administration consists in pills of the alcoholic extract and powdered seed. The smallest dose susceptible of producing sleep is eight grains in pills of one grain. This dose, however must be rapidly augmented. The action on the skin, the kidneys and sexual organs, attributed to Indian hemp is without any practical importance.—*Prayer Vierteljahrschrift*, 1860.—*Journal of Materia Medica.*

DIGITALIS IN DELIRIUM TREMENS.

A few weeks ago, we mentioned in our periscopic department, the treatment of delirium tremens by large doses of the tincture of digitalis. In the Oct. 13th number of the *Med. Times and Gaz.*, Dr. Ballard coroborates the statements of Mr. Jones. as to the efficacy of this treatment, and gives several additional cases. "My own impression," he says, "from what I have seen and heard from Mr. Jones is, that in tincture of digitalis, we have a true *counter-poison*—an addition to that class of mutual antidotal poisons of which opium and belladonna have been the most recent example. Alcohol is the remedy by which we counteract the depression produced by digitalis; the converse is also true; digitalis is most remarkably an antidote for alcoholism."

The article recently copied from an English journal on the administration of very large doses of the tincture of digitalis in delirium tremens has attracted much attention,

The English officinal tincture is of the same strength as that of the U. S. Pharmacopœia. A practitioner of this city has informed us that he has frequently prescribed the tincture in drachm doses during acute inflammations, but the use of the article in half-ounce doses in conditions in which the arterial sedative effect is not apparently indicated seems extremely hazardous. Yet it is claimed that the effects of digitalis in inflammatory affections and in delirium tremens are exactly contrary. In inflammatory disease it subdues and regulates the pulse, whilst in delirium the pulse by it is increased in force and fullness.—*Journal of Materia Medica.*

VENTILATION AT NIGHT.

An extraordinary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul night air from within. Most people prefer the latter. An unaccountable choice. What will they say, if it is proved to be true, that fully one-half of all the diseases we suffer from, is occasioned by people sleeping with their windows shut? An open window most nights in the year can never hurt any one. In great cities night air is often the best and purest air to be had in the twenty-four hours. I could better understand in town shutting the windows during the day than during the night, for the sake of the sick. The absence of smoke, and quiet, all tend to make night the best time for airing patients. One of our highest medical authorities on consumption and climate has told me that the air of London is never so good as after ten o'clock at night.—*Florence Nightingale.—New Orleans Medical News and Hospital Gazette.*

Editorial Department.

TO THE FRIENDS AND PATRONS OF THE NORTH CAROLINA MEDICAL JOURNAL.

In assuming our Editorial duties, we deem it proper to make the following statement of facts, for the purpose of showing why we have not entered upon our labors at an earlier day.

At the annual meeting of the State Medical Society, held at Washington in April last, Dr. S. S. Satchwell and ourself were appointed to take charge of the Editorial department of this Journal, as soon as Dr. Warren, who was about to remove from this state to Baltimore, should complete his second volume, which he was engaged upon at that time. It was then believed the late Editor would complete his labors in time for us to bring out the first number of the third volume long before the close of the year. We were disappointed in these expectations. The closing number ot the second volume was only received by us during the first week in December. That prevented our getting to press before the first of the present year, and clearly shows that this delay has been unavoidable on our part. The late Editor had many real troubles on the score of timely issues. We sincerely hope to escape them all. Situated as we are, at the capital of the State, and in the midst of publishing establishments, whatever faults our Journal may have in other respects, we will not be able in future to render any excuse for failures in this particular.

Being thus compelled to commence our labors with the beginning of the year, we shall so date the first number of the third volume of the North Carolina Medical Journal.

In regard to ourselves, we wish to state that it will be our pleasure, as it shall be our constant endeavor, to make the N.

Carolina Medical Journal acceptable and useful to its readers. In order, however, to accomplish these desirable objects, we hope our friends in this state, especially the members of the State Medical Society, will render us all the assistance they can, by making this Journal the vehicle of their thoughts, and the channel through which their skilful experience and useful observations may be heralded abroad. Our regular practitioners of medicine are a laborious, experienced and skilful class of men; but their time is almost wholly occupied with incessant practical labor, reflection and reading. They write but little. Let them add to the profitable enjoyment of reading, during some of the few hours they are able to snatch from the more arduous labors of their profession, that other pleasure and useful employment of writing out their observations and thoughts for publication in their home Journal. By so doing, they will add to their fame and usefulness at home and abroad, besides ensuring the success of this undertaking, a matter in which every true son of Æsculapus, within the borders of the ever faithful and good old State, should feel a just and hororable pride. It must be remembered that, this is not an individual enterprise, but a work instituted by the Medical Society of the State of North Carolina for the inculcation and dissemination of scientific principles in the practice of medicine, and for the promotion of the general interest and welfare of the regular profession. The Society itself has had its claims to respectability, usefulness and importance duly recognized by the General Assembly in an act of incorporation, and in having been specially chosen by that honorable body to discharge the high and responsible duty every six years of selecting from among its regular members, those persons, who shall for the time constitute the Board of Medical Examiners for the State.

Such is the origin, and such are the objects of this Journal; and we feel persuaded that the regular members of the profession in North Carolina, particularly those belonging to the State Medical Society, upon whom we believe we have

the right, under all the circumstances of the case, to call for material aid and support, will not permit it to perish.

It is true we have commenced our labors under the most *discouraging circumstances*, and in perilous times. But as it is not necessary for us to parade these *circumstances* before the public, and as it would be in very bad taste to do so, we shall simply ask for a little indulgence, until we get better seated in our editorial chair, with such surrounding and facilities for the work in hand as we certainly do not possess at present, but as certainly mean to command. In a word, we only ask for that courtesy which the members of polished society and literary circles always extend to accredited strangers.

With these feelings, and with a firm resolve to do our best, in the absence of our Associate Editor, Dr. S. S. Satchwell, who is at this time in Paris, and in the face of all the troubles of the times, we hopefully send forward our messenger.

CHAS. E. JOHNSON.

DR. MANSON'S REPLY TO DR. HOWARD.

We commence, in this number of the Journal, Dr. Manson's reply to Dr. Howard's review of the former gentleman's essay on Malarial Pneumonia. This subject will be continued in each number, until Dr. Manson has completed his reply. It will be remembered that this is done in accordance with an order passed by the Society at its meeting in Statesville, in the spring of 1859, in order to give Dr. Manson a fair and impartial hearing by the same public whom Dr. Howard addressed. We ask for Dr. Manson's reply a careful perusal and a deliberate judgment.

DIPHTHERIA.

We call atiention to the admirable article on Diphtheritis, in this number of the Journal, from Dr. Hartmann, of Cleaveland, Ohio. This subject is one worthy of our most careful thought and matured consideration. Therefore, we make no apology for the length of the article.

This disease is gradually spreading over our whole country, and wherever it makes its appearance gloom and melancholy follow in its train. Anything then which is calculated to awaken the professional mind to the fearfulness of its character, and yet, at the same time, to arm the practitioner of medicine against its fatal inroads, should be gladly received. It is in this spirit we lay before our readers, this long, elaborate, but able essay.

We have had this disease in our midst, but like all other epidemic visitations with us, it has been characterized by mildness. In a population of five thousand souls, there has not been more than five or six deaths from it.

Situated on the eastern slope of the primary formations, and occupying very nearly a middle position in the State, we are, of course, liable to the diseases of the eastern or paludal districts on the one hand, as well as to those belonging to the higher, hilly and mountainous regions on the other. But these diseases, whether more properly belonging to the one or the other section, never prevail extensively with us, or assume a virulent type. Indeed, Raleigh may be said emphatically to be a healthy place.

BLOODLETTING-STIMULANTS.

We are not Sangrados; nor are we unqualified admirers or followers of the theory and practice of Drs. Todd and Bennet. We think that truth lies in neither extreme; while a spirit of conservatism and sound principles require

that the course of practical medicine should conduct along the middle paths. *In medio tutissimus ibis*, is as true in medicine as in anything else. Surely, then, it is the wisest course for medical men to adopt, because it is the only one that will certainly enable them when endeavoring to avoid one danger or mistake not to fall into another. For example; we believe that in many instances, the judicious use of general and local blood-letting will save much precious time and many valuable lives, and prevent often times the occurrence of troublesome sequelæ; while on the other hand, we know that the indiscriminate employment of tonics and stimulants will be followed by evil consequences. Under these convictions, and for the purpose of showing how some of tho leading professional men of this country are awakening to a just sense of their duties and responsibilities in the premises, we have selected from the "Philadelphia Medical and Surgical Reporter," the remarks of Dr. Saml. Gross on "*The tendencies of the present day in regard to the doctrine of debility and the treatment of diseases by stimulants.*"

We regret that our limits forbid our copying the whole of the discussion on this subject before the "Philadelphia County Medical Society," as rendered in the "Reporter." The paper read by Dr. Gross seems to have been eminently suggestive, for it produced a lengthy discussion, in which Drs. Coates, Condie, Darrach and Henry Hartshorne, took part.

AMERICAN DIPLOMAS.

We have copied from the number of the London Lancet for November, 1860, an article upon this subject, showing what little importance the English, after a while, will place on the Diplomas granted by Medical Colleges in this

country. It is of value also to North Carolinians, as showing the wisdom of the General Assembly of this State, in establishing a State Board of Medical Examiners, whose duty it is, to assemble on the first Monday in May, in each and every year, and examine all applicants for license to practice medicine in the State and according to law, without regard to the Diploma. They have followed in this respect, the good example of the Army and Navy Boards of Medical Examiners for the United States. In these arms of the public service, an applicant for surgeon's or assistant surgeon's place, with half dozen diplomas in his pocket, will be required to stand the same examination with him who has no diploma.

SUBSCRIBERS.

We shall send this number of the third volume of the North Carolina Medical Journal to every one whose name we find on the subscription list. Of those who wish to continue their subscription, we respectfully request that they will at once forward to us three dollars, the subscription price in advance for one year. Of those who wish to discontinue the Journal, we as respectfully ask that they will immediately return us this number. Prompt attention to these requests will save much trouble to us and all concerned. We do not wish to force, or seem by the force of circumstances, to compel any one to take the Journal, who has concluded in his own mind, and for reasons satisfactory to himself, to discontinue it. To avoid this difficulty let every such person promptly return us the first number. It will be worth more to us than to them; while it will clearly point out to us who are our real bona fide subscribers, and consequently, what are our prospects for the future.

We sincerely hope, however, that all our old friends will not only continue their own subscriptions, but will actually feel called upon to exert themselves earnestly and actively to extend the circulation of the Journal.

EXCHANGES.

The North Carolina Medical Journal will hereafter be published in this city, and we take the earliest opportunity of making the request that our exchanges shall in future be sent to "*Medical Journal,*" Raleigh, N. Carolina. Since the 20th of December, some kind friend has regularly forwarded to us our exchanges from Edenton. He will please accept our thanks for his kindness.

ARRANGEMENT.

The arrangement of the matter of this number of the Journal is not exactly such as we mean to have it in future. In our haste to get out in January, we have paid less attention to this subject, than good taste requires. And, to make the the matter a little worse, our printers have inadvertently altered the grouping of some of our selections.

CORRESPONDENTS.

Terebinth and Student were received too late for the January number of the Journal. They shall appear in our next, or March number.

THE BALTIMORE JOURNAL OF MEDICINE.

This is a Bi-Monthly Journal, and is edited by Edward Warren, M. D., Professor of Materia Medica and Therapeutics in the University of Maryland. We have received the first number of this periodical, and extend to it a cordial welcome. It is gotten up in handsome style, and is an able and spirited production. We wish the Journal and its talented editor every success.

VOL. III.] MARCH, 1861. [NO. 2.

THE

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OF

NORTH CAROLINA,

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CHAS. E. JOHNSON, M. D.
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NORTH CAROLINA

MEDICAL JOURNAL.

VOL. III.] MARCH, 1861. [NO. II.

Original Communications.

A Reply to Dr. W. T. Howard's Review of the "Essay on Malarial Pneumonia," which appeared in the Transactions of the Medical Society of North Carolina.

BY OTIS FREDERICK MANSON, M. D. MEMBER OF THE MED. SOC. OF N. C.

(*Continued.*)

THE HEADACHE OF MALARIAL PNEUMONIA.

The next symptoms in regular order, we have thus noticed under the head of the "General Course and Progress" of this disease:

"*Pain in the side* of the pleuritic character is generally next experienced, it being absent in very few instances. To the reactive fever, dyspnœa and cough soon succeed. In some cases the cough is tardy in its appearance, or is so slight as to elude the notice of the patient and physician. *Headache, Nausea* and *Vomiting* are *very frequent* and *prominent* symptoms, and frequently precede the cough and pain; the fluids ejected from the stomach being *usually* of a bilious character."

As our reviewer and ourselves do not differ very essentially in regard to any of these symptoms, except as to the character and frequency of the *Cephalalgia* in its bearings upon the diagnosis, it will not be necessary to dwell upon any

save the latter as a prominent and important feature of this affection. Our reviewer has the following observations on this symptom:

Headache is a "very frequent and prominent" symptom of most acute affections of a febrile and inflammatory character, and is by no means infrequent in trivial disorders. Pneumonia, of whatever form, offers no exception to this law. Walshe states that in the ordinary acute form, *cephalalgia* is of frequent occurrence, and comes on with the outset, as part of the febrile state. According to Wood, the fever is very often attended by *pain in the head*, especially about the brows or forehead, from which the patient may even suffer more than from the pain in the chest: and occasionally, the *headache* is the only symptom of which the patient complains for the first few days.(*a*) Dickson mentions the occurrence of *headache*, with pains in the back and limbs, and nausea even to vomiting.(*b*) Other authors, also, notice the presence of *headache*, as supervening upon the reactive fever. (*c*) It was absent in only 8 out of 57 cases observed by Louis; commencing at the onset, it ceased after the eighth day.(*d*) Grisolle regards *cephalalgia*, as among the most frequent sympathetic phenomena, having found that in 125 cases in which it was sought with care, there were only 20 which never presented it at some time during the sickness. In the vast majority of cases, it occurred in the beginning—there being only three exceptions to this rule in his experience. In *five-sixths* of the cases, it manifests itself in the forehead.(*e*) *Headache, then, is common alike to simple and 'malarial pneumonia.'*"

Whilst we readily admit that headache is a very frequent and prominent symptom in many febrile and other affections, and whilst we cheerfully yield assent to the statements of the authorities cited by our reviewer, that this symptom may often be present in other forms of pneumonia, yet we by no means concur in his curt and abrupt conclusion which is as erroneous as it is indefensible, that "headache is *common alike* to simple and malarial pneumonia," and we are prepared to prove, not only by the admissions

(*a*) Op. cit. vol. ii, 2.
(*b*) Op. cit. 605.
(*c*) Barlow, op. cit. 188, C. J. B. Williams op, cit. vol. iii, 590.
(*d*) Anatomical, Path. and Ther. Researches on Typhoid Fever, 11,114,
(*e*) Op. cit, 276.

of our critic himself, but by the testimony of others more competent and authoritative on the subject, that the cephalalgia in this affection is not only *more* frequently present, but is also more intense in its violence than in the Idiopathic form of writers, besides possessing other distinctive peculiarities. If we embrace the views borrowed from La Roche, which our critic upholds, that this disease is a "*true* pneumonia, complicated by the accidental impression of a malarial law," in which "the *leading phenomena* of Remittent fever are *engrafted upon* and *blended with* the rational symptoms of *ordinary* pneumonia," then we shall be forced to admit that our critic in his hot haste to discredit the correctness of our delineation of the disease, has precipitated himself into a dilemma from which there is no escape. It could never be questioned by those who possess an intimate practical acquaintance with remittent or any other form of malarial fever, and will not be opposed by those who are at all conversant with the literature of the subject that in this class of diseases the phenomena referable to a morbid condition of the great nervous centres are the most conspicuous and important presented to the observer, nor "can we fail to be impressed," as M. Briquet truly remarks,* "when we view the numerous authorities who from the period at which medicine was first cultivated with precision, have associated intermittent diseases with the nervous system. Among them Bellini, Boerhave, Selle, Borelli, J. P. Frank, Brugnoni, Reil, Hufeland, Hildenbrand, Forni, Trnka, Van Swieten, Petit-Radel, Fodéré, Voulonne, Alibert, Guerin de Mamers, Waidy, Georget, M. M. Rayer, Bricheteau, Brachet, Nepple, Montgellaz, have placed their seat in a morbid alteration of this system. Others, as Cullen, Giannini, Stahl, Roche and Broussais, in explaining intermittent fevers in their own manner, acknowledge that they are composed of actions which are principally produced through the intervention of the nervous

*Traité Therapeutique du Quinquina, 2me ed. p. 335, Paris, 1855.

system; whilst all of these physicians positively admit that the nervous system is the theatre in which are exhibited the principal symptoms which constitute a paroxysm of fever.

So prominently marked indeed are the perturbations of the nervous system, and especially those of the cerebro-spinal axis that M. M. Rayer* and Guerin de Mamers† have taught that *malarial fever* should be considered as a *cerebro-spinal neurosis;* and M. Maillot‡ guided, not only by the symptoms observed during life, but sustained as he contends by post mortem revelations, has treated them under the designation of "*Cerebro-Spinal Intermittent Irritations.*" Whatever may be, however, the views which authors entertain of its pathology, all writers upon this subject are in harmonious accord in regard to the painful condition of the *nervous system of relation* in all forms of Periodical fever, and all unite in the opinion that Headache is the most prominent as it is the most intense and agonizing suffering experienced by the patient.

"*Pain in the Head*, back and limbs," says Bartlett (a high authority with our critic) "is one of the most constant, and in many cases one of the most distressing accompaniments of this disease. Cleghorn says he has sometimes known this pain so *intolerable* and accompanied with such *inexpressible anxiety* that persons of the soundest judgment and morality have been *tempted* to *destroy themselves* to *get rid of it.* Dr. Stewardson found *headache* present in all but *one* of *sixteen cases*, terminating in recovery. It generally commenced on the first day of the fever, was *most severe* during the *exacerbations* and commonly *declined* after the middle period of the disease, at least during those hours of the day when the patients were visited. Dr. Boling gives the following account of this symptom as it shows itself in severe

*Dict. de Med. (en 21 vols.) tome xii, pp. 388–390, Paris, 1825.

†Journal des progrès, 1830, tome ii et. iii.

‡Traité des Fièvres ou Irritations Cérébro, Spinales Int. Paris, 1836.

cases. "As the febrile excitement is developed in the first exacerbation, *pain in the head* becomes *violent* and *distressing* and is of a *throbbing* character. It is generally in the forehead just above the frontal sinuses, but is also occasionally felt in the occipital region. During the earlier remissions it either abates or entirely subsides, but later, is *very distressing during the remissions.* At this period too, it looses its throbbing, pulsating character, and is *fixed* and *steady.*"*

Wood, whose treatise on the Practice of Medicine, according to our critic "is the Prayer Book of the American Medical Practitioner," declares that "the patient *almost always* complains of *headache* which is often *severe*, *tensive* or *throbbing*, and in *most instances the source of greater suffering than any other cause.*"†

Drake, in his chapter on Remittent fever after observing, that the *Headache* consists of a "dull pain" in the *forming* stage, which in the chill "grows *worse*," in the exacerbation "becomes *more acute*," and that in the *remission* there still "*remains* a dull aching of the *head* and back."‡

Valleix states that "in the chill that *cephalalgia* of a variable intensity is one of the symptoms which next to the shivering, elicits the most complaint from the sick," that in the exacerbation the headache *persists* or even *augments*, and that "in the *remission*," a slight *pain in the head remains.*"‖

Maillot characterizes the *headache* as *intense*, (vive céphalalgie.")§ Briquet terms it an *atrocious headache* ("une céphalalgie *atroce*,")¶ and Nepple as an *intense pain* in the *forehead* (*céphalalgie frontal intense.*")††

Eberle, a favorite authority with our critic, observes that in *Remi t'ng fever* "*aching pains* in the *Head*, back and ex-

*Fevers of the United States (pp. 313–14,) Phila., 1847.

†Practice of Medicine, 3rd ed. vol. 1, 266.

‡Diseases Int. Valley, N. A., 2nd series, p. 96.

‖Guide du Médecin Practicien, 3me ed. Tome v, p. 550.

§Traité des Fièvres, p. 15, Paris, 1846.

¶Traité Therapeutique due Quinquina, 2me ed., p. 381.

††Essai sur les Fièvres Remittentes et Intermittentes, p. 100, Paris, 1828.

tremities are the prominent symptoms of its initial stage, and that when the fever is once completely established, the *pains in the Head*, back and lower extremities become *greatly aggravated.*"

It will be seen from this examination, that according to the most popular writers on the subject—the majority of whom our critic approvingly endorses on other points—that *Headache* is a *constant*, *conspicuous* and intensely developed phenomenon in Remittent fever, being *present* in the prodromic stage and in the *chill;* becoming *more violent* and agonizing in the *exacerbation*, and often clinging to the patient in the *remission*, thus constituting a prominent and important characteristic, not only in its extreme development, but still more in the periodical variations of its violence. Yielding then for a moment to the positions of our Reviewer, that malarial pneumonia "is a *true* pneumonia complicated by the impression of a malarial law," in which the "*leading phenomena* of Remittent fever are engrafted upon and blended with, the rational symptoms of ordinary pneumonia," and admitting at the same time that Headache is a frequent and prominent symptom in the simple form, these concessions can only lead to a direct and positive refutation of the position of our critic that "Headache is common alike in simple and malarial pneumonia," for being (as we have seen) a symptom almost universally present in Remittent fever, and also, as he avers, a frequent and "prominent symptom in pneumonia of whatever form," it necessarily follows that it must be more certainly and constantly present in the malarial variety, in which, according to our reviewer's own statement, the leading phenomena of Remittent fever are *engrafted upon* and *blended with*, the rational symptoms of ordinary pneumonia.

But we have better and more competent authority to refute the unsustained, inconsistent and barren conclusions of our critic, that "Headache is common alike to simple and malarial pneumonia," than any argument derived from his own admissions. The testimony of M. Grisolle, whose

treatise on Pneumonia, our reviewer endorses as "possessing a character of completeness which in the present state of our knowledge could not have been given to the history of any other disease," and whom he extols as "the greatest of all modern standard authorities on the subject of pneumonia," will not of course be repudiated on this point. This author although uniting with M. Louis in regarding cephalalgia as among the "most frequent sympathetic phenomena of simple pneumonia," does not sustain our reviewer when considering this symptom as a differential diagnostic. In his section on Bilious Pneumonia which as we shall see hereafter, he has erroneously erected into a form of pneumonia as distinct and different from his Intermittent and Remittent Pneumonia, this author emphatically declares that in the bilious form, "La céphalalgie toujours limitée au front etait gravitative et *persistait plus long temps* que dans les phlegmasies *ordinaires.*"*

"From the *intensity* of the Headache," said Dr. Chapman who doubtless had witnessed all forms of pneumonia, "the disease has been properly called *Pleurisy of the head.*"†

"The Head," says Dr. Condie in a note to Watson's Practice," being *almost invariably* affected before the pneumonic symptoms are developed, it is often called *Pleurisy* of the *Head.*"‡

Among the "signs which *distinguish* this disease," which he terms "*Intermittent Pneumonia*," Dr. Constant†† remarks that "*Violent Cephalalgia* is one of the earliest symptoms being either frontal or sincipital and is often accompanied by severe lumbar pain which observes the same stages of *increase* and *decrease* as itself." "*Acute pain* in the *forehead*," said Eberle whom our reviewer quotes as giving "no meagre description of this disease," and of whose brief notice he endorses the "opinion of La Roche," "that it embodies

*Traité de la Pneumonie, p. 404.

†Benedict's Compendium of Chapman's Lectures, p. 217.

‡2nd American Edition (Note) p. 612.

††Ranking's Abstract, Am. ed. No. 18, p. 73.

all that need be said on the subject," "*is almost constantly present.*"*

It was doubtless owing to the well known frequency, intensity and periodical character of the headache in malarial fever that induced *Hildenbrand* to consider it diagnostic of this disease.

"The complication of Intermittent Fever with the inflammatory disease, he states, was *proven* by the *violent pain in the head* which *always* returned with the exacerbations and by the eruption around the lips which ordinarily accompanies intermittent fevers and serves to facilitate the diagnosis when it is obscure"†

From our own personal observation, and the result of our researches upon the subject, we have no hesitation in declaring our conviction, that headache is *more constant* in its occurrence, more *intense* in its violence, and partakes more of the periodical character in this affection than in simple or other forms of pneumonia, *malgrê* the opinion of our critic, that it has no distinctive value, and is "*common alike* to simple and malarial pneumonia."

We opine that it will put even the ingenuity of our reviewer to the test to reconcile this declaration with his statement that "the paroxysmal and periodical recurrence of the febrile movement is undoubtedly the *leading, distinguishing characteristic* of pneumonia, impressed by a malarious influence." Does not the headache also partake of the paroxysmal and periodical character? Does it not increase and decline with the "febrile movement?" Certainly! Then his unqualified statement, with which he summarily dismisses this symptom, that "headache is common alike to simple and malarial pneumonia," is simply absurd.

Our critic in endeavoring to invalidate the correctness of our delineation of this form of pneumonia, by completely

*Practice of Medicine, vol. 1, 4th ed. p. 308.

†Médecin Pratique, traduit du latin, Par L. P. Auguste Gauthier, D. M. P. Paris, 1824, Tome 2, p. 45.

ignoring the differential value of this symptom, reminds us that in consulting brevity we have not given it that prominency in our Essay to which it was justly entitled. In our article on Remittent fever, however, to which the reader was referred, the cerebro-spinal symptoms resulting from an "inordinate determination to the nervous centres," and their relations to the nature and treatment of that disease were considered at length.

THE BILIOUS SYMPTOMS OF MALARIAL PNEUMONIA.

Whilst considering the name of the disease, we alluded to these symptoms, and indicated not only the objections we entertained to their presence conferring a title upon this malady, but also adverted to the undue prominency assigned them by writers in their portraitures of the affection. As our reviewer and ourself do not materially differ in our views in regard to the import and value of the symptoms, it will not be necessary to dwell upon them, but we shall merely call attention to his following conclusion on this head to which we shall revert hereafter:

"But, notwithstanding all these considerations, persisting nausea, or marked irritability of stomach, bilious vomiting and other evidences of hepatic trouble much oftener present themselves in pneumonia, offering positive proofs of the mingling of a malarious element, than when no such proofs are present; and consequently, when taken in connection with other phenomena should arrest attention as among the corroborative tokens of that special influence."

In our essay in the description of the symptoms, the following remarks occur in this connection: "Nausea and vomiting are very frequent and prominent symptoms, and frequently precede the cough and pain, the fluids ejected being usually of a bilious character," and in the latter progress of the disease, we observed that "the skin and sclerotica assume a jaundiced hue." In considering the "*Diagnosis*" the following reference to these symptoms also occur:

"The evidences of hepatic and gastric disorder have gained for the

malarial form the epithet of "bilious," and although we utterly reject that view of its pathology, which associates either this disease or any form of malarial disease necessarily with hepatic lesion, save as regards the occurence of the latter as a secondary affection of minor importance, yet the frequent presence of nausea and bilious vomiting in several cases, will doubtless afford some aid to diagnosis; those hepatic symptoms dependent on sympathy of contiguity, where the inferior lobe of the right lung is implicated, in pure pneumonia, being of exceptional occurrence."

Before dismissing the subject, however, we cannot, from a sentiment of duty, refrain from adding a few practical observations. In what proportion of cases of this disease, the evidences of disordered hepatic function are absent or present we cannot positively determine, but the daily additions to our experience convince us that they are by no means so universally present as would be inferred from its usual designation, or from the emphasis bestowed upon these symptoms by several authorities. As Drake, though retaining from custom, the name at the head of his chapter on the subject, truly observes the "phrase (Bilious Pneumonitis) does not always indicate a disease attended with bilious symptoms and so far its employment involves a *solecism.*"* So on the other hand Grisolle observes that "nausea and bilious vomiting are not only present, according to J. Frank and Stoll in simple Pneumonia,"† but also observes of this latter disease, "there is no acute disease in which a jaundiced hue of the skin and sclerotica are more frequently observed."‡ Guided by the symptoms of gastric and hepatic disorder, Bouilland contended that one half of the cases observed by him in Paris in 1836, were instances of Bilious Pneumenia, treated according to his usual method of *la saignée coup sur coup*, whilst Grisolle,‖ contesting this statement, unites with Valleix§ in asserting that it is

*Diseases Int. Valley N. America.

†Traité Pratique de la Pneumonie, p. 402,

‡Traité de la Pneumonie, p, 382,

‖Ibid p, 431;

§Guide du Médecin Practicien, 3me ed, Tome premier p, 439.

only in marshy countries that Intermittent and Remittent Pneumonias were observed. Whilst, therefore, we willingly concede that the evidences of prominent hepatic disturbance accruing in a group of cases would yield some aid to discrimination, yet we are as firmly convinced that an opinion should not be based solely on the presence of these symptoms in isolated cases and that very often the diagnosis between this and other forms of pneumonia must be formed altogether without their assistance.

THE PULSE AND FEBRILE ACTION IN MALARIAL PNEUMONIA.

In our further description of the symptoms of this disease, the general character of the pulse and other febrile phenomena, were thus noticed: "The febrile action presents decided peculiarities being *usually* distinctly paroxysmal and remittent. The remissions are, however, *sometimes* obscure, and an active fever exists during the whole of the day and night," and again, after the remarks previously quoted, on the chill in this disease, we added:

"A marked increase of fever follows this insensible chill, which continues to increase in intensity, until an exacerbation, more or less perfect, is developed. The pulse which had been very frequent, and contracted in the chill becomes expanded, acquires force, and sometimes, though rarely, becomes full or tense. The term *compressible* applies to the usual condition of pulse, and the idea entertained on its careful examination is that the heart is acting with only a seeming force, and not with real vigor. In some few cases, the pulse has been observed to be *nearly normal*, or *morbidly slow*."

And in considering the "Diagnosis between Malarial and other forms of Pneumonia," we also stated the usual character of pulse in this affection, as being "frequent, soft, of moderate fullness, compressible and never, or rarely, very full, tense or hard," as in Simple Pneumonia, according to the descriptions of the most distinguished writers on the subjects. As further illustrative of the different states of the pulse and calorific function in these diseases we added:

"Nor is the circulation in simple pneumonia subject to the same diurnal variations. It is true that writers aver that in some cases of the latter form the fever is sometimes evidently remittent, but granting that these cases did not belong to the malarial variety (though we strongly suspect the contrary,) still I think that a *marked paroxysmal character* is *seldom* or *never* observed in the simple form. The regularly recurring cold stage is another guide to discrimination, seldom absent in the malarial affection, whilst in the frank form the skin is uniformly of an elevated temperature in the great proportion of cases, generally being hot and dry at all periods of the day and night, whilst in the exacerbation of the former disease, the heat is more moderate and is subject to a daily decline in the remission which occurs immediately before the reappearance of the chill."

The observations of our reviewer upon this head are in accordance with the spirit which characterizes his production, and as they are not very extended, we copy them in full:

"The *Pulse*.—Dr. Manson states that in "malarial pneumonia," the "term *compressible* applies to the usual character of the pulse," and that it is "frequent, soft, of moderate fullness, and never or rarely very full, tense or hard." "In some few cases, it has been observed to be nearly *normal*, or *morbidly* slow."

In their description of the pulse in acute sthenic pneumonia, authors do not uniformly employ the same language. Thus Dr. *Wood* says it is usually full, strong, and only moderately accelerated, but when very frequent is apt to be smaller and less vigorous. Swett states that it is generally full and soft, and ranges from 90 to 110 in a minute. Andral remarks that it is very variable; but its most usual character is that of being frequent and large. Valleix represents it as generally full, accelerated and slightly compressible. Walsh alleges that unless when very frequent—and it may reach 140 to 160 beats per minute—it is *habitually full and resisting;* is of much greater frequency in the mass of serious and fatal cases than in those of recovery, generally attaining its maximum frequency by the third or fourth day; but he has known pneumonia run its course, both in old persons and young adults, with a pulse never exceeding 60. According to our own observations, the pneumonic pulse is scarcely ever hard and corded as it is in pleurisy, but is generally fuller and softer. The condition of the pulse depends upon the character of the disease—whether this be of sthenic or asthenic type. If malaria complicates a case of the former, it is habitually full and resisting, demanding those repeated bleedings which the older physicians practised previous to administering cinchona. Cleghorn, as we shall presently see,

was a bold bleeder in the epidemic pneumonias which he encountered in the Island of Minorca, and of which he has left us so vivid an account. At the present time, nearly all diseases wear the livery of enervated power, and in various localities far removed from each other, pneumonia, as well as other affections, appears divested to a marked extent, of its former dominant sthenic character. Everywhere this seems to be the prevailing medical constitution of the times, of which the reign of carbuncles, carbuncular boils, whitlows, etc., that for the past few years have prevailed in such unwonted proportion, may be considered, among other evidences, as a striking proof. A recent writer states that he is as cautious in ordering a patient to be bled as a surgeon would be in deciding upon the amputation of a limb; and having been for the last three years connected with a dispensary, where all the usual forms of disease present themselves, he had recommended bleeding only once during the whole of that period in that institution."

"It follows, then, that a soft and compressible pulse cannot be deemed at the present time, at all peculiar to that form of pneumonia which is imbued with the poison of malaria; and in that variety of the disease termed *typhoid*, from the predominance of the asthenic state—it is habitually soft and readily compressible."

Such are the sterile conclusions to which our reviewer arrives in regard to the differential characters of the pulse in Simple, Malarial and Typhoid Pneumonias, and judging from his own declarations, as conveyed in his own language, the reader is left to infer that our observations in regard to the condition of the arterial circulation in these forms of disease had been as well omitted—a conclusion as erroneous as it is barren and unsupported by facts or authorities. Of all diseases classed among the idiopathic inflammations, in which the symptoms of vital re-action are most vigorously and prominently displayed, simple acute pneumonia presents one of the most conspicuous examples. It therefore, has been selected as the field upon which the partizans of the inflammatory theory have long intrenched themselves and, upon which the defenders of the anatomical pathology have deemed themselves impregnable. Dating, therefore, from the earliest records of medicine the phenomena referable to an intense excitement of the heart and arteries have played an important *rôle* in this affection,

and it has been selected as the most appropriate theatre in which to exhibit the triumphs of the lancet and the auxiliary weapons of the anti-phlogistic armament.

With a view, therefore of elucidating the Diagnosis between simple acute primary Pneumonitis, and the malarial and typhoid forms, we quoted the definition of Cullen, as containing a concise description of the characteristics of the pulse in the idiopathic disease, and whose correctness has been sanctioned by the most distinguished successors of that illustrious physician. But in opposition to this, our reviewer alleges that "in their descriptions of the pulse in acute sthenic pneumonia, authors do not uniformly employ the same language," thus implying that there is no generally recognized grade of vascular excitement in that disease, no common standard by which it may be designated or compared with the pulse in other varieties of pneumonia. Let us glance at the teachings of authority on this point, and that we may fairly test the correctness of his declarations, let us first refer to the identical authors cited by our reviewer. We quote them in the same order, and will introduce them in his own words:

1st. "Dr. *Wood* states *it* (the *pulse* in acute sthenic pneumonia) is usually full and strong, and only moderately accelerated, but when it is very frequent is apt to be smaller and less vigorous." As this account is quoted by our critic from his "Prayer Book," and with which he ought therefore to be religiously familiar, we might expect that if Dr. Wood had contributed any light on the diagnostic characters of the pulse in Simple Bilious Pneumonia that it would have been referred to in this connection by our reviewer. But no! with the singular obliviousness with which our reviewer, as we shall see is so often conveniently afflicted he ignores his favorite authority when he throws any real light on the subject at issue, or casts the weight of his evidence in our favor. Let us see what the "Prayer Book" contains in his behalf. After stating that in Bilious Pneumonia the fever "is always remittent," Dr. Wood observes

that "the *grade* of inflammatory *action* is in *general*, *less elevated* than in *ordinary* pneumonia, and sometimes the fever assumes a typhoid type, the pulse becoming feeble, the tongue brown and dry, and the mind somewhat wandering." The reader will perceive that this passage fully sustains our views of the differential characters of the pulse in the two diseases. Nor can our critic dispute its correctness, for in his array of the "modern standard authorities," he quotes the description of Dr. Wood *in extenso*, from which the latter sentence is extracted and pronounces it to be a "succinct and comprehensive description of bilious or malarial pneumonia," in which "its distinctive features" are portrayed "in his (Wood's) wonted, clear and accurate style," yet, in considering the "distinctive features" of the pulse under its proper head, the "distinctive feature" is entirely unnoticed. Our critic, like many others who ostentatiously parade their "Prayer Books," has received but little benefit from its precepts, at least, on this point.

2nd. Swett.—Our reviewer continues, "Swett states that *it* (the pulse in acute sthenic pneumonia) is generally full and soft, and ranges from 90 to 110 in a minute." This quotation does not give the whole truth, however, for not only does this writer state the febrile re-action in simple pneumonia to be *usually considerable* and *sometimes intense*, but in considering the "treatment," he warmly advocates blood-letting as the "principal remedy," to be succeeded by "Tartar Emetic," thus indicating the grade of arterial excitement to be vigorous and vehement, whilst in his brief notice of "Bilious Pneumonia," which he observes "is sometimes met with, especially in miasmatic regions, the tendency is to a typhoid state," and that "although the pulse may be full and strong" (as we ourselves have stated it to be in rare and exceptional cases) yet he observes that "you must be careful how you bleed patients in this form of the disease, as it is apt to assume, in its progress, a typhoid character." There is, therefore, no real discrepancy be-

tween the views of this writer and our own. On the contrary, the diagnostic value of the pulse in these diseases which we have announced, is fully supported. In the estimation of our critic, they are unworthy of notice.

3rd. Andral.—Our reviewer continues, "Andral remarks that *it* (the pulse in acute sthenic pneumonia) is very variable; but its most usual character is that of its being frequent and large." So far, so good; but this isolated sentence does not give a satisfactory idea of Andral's estimate of the vigor of the circulation in Frank Pneumonia. This eminent writer in continuation of the quotation of our reviewer adds: "When the inflammation is intense it (the pulse) sometimes presents a remarkable smallness which disappears after abundant bleedings;" and again he states, "Sometimes after copious venesection and when every symptom announces that the inflammation has diminished the pulse loses nothing of its strength and hardness, (*de sa force et de sa dureté*) thus clearly implying that these were the pre-existing qualities."* If we follow him to the Treatment, we shall fully understand what must have been the strength of the pulse in the disease as it usually occurred in his practice, for he observes, "That for many centuries observation had led physicians to resort to Blood-letting to a greater extent in this affection than in any other; that the *first bleeding* ought to be carried to the extent of *sixteen ounces*, and even *to twenty;* that if the symptoms should persist we should not hesitate to *re-open the vein*, which might be repeated *two or three times* in the *first twenty-four hours;*" that "on the *succeeding days* the *bleedings* should be *boldly repeated* if the symptoms did not yield, and that even *advanced age* should not prevent the practice of *numerous venesections.*" In addition to these phlebotomies *à la Sangrado* he advised "the application of *leeches*," which should not take the place of the "ouverture de la veine," but "might be made *simultaneously* while the *blood was flow-*

*Clinique Médicale Tome Troisième, 4me, Ed. pp. 504–5.

ing from the vessel," and that "it was *often* necessary to *cover the painful side* with *leeches.*"†

This author gives such a meagre and unsatisfactory account of *Pneumonia Bilieuse* that it may be safely asserted that he possessed no definite information on the subject. The disease as described by Stoll, he rejects as a "*true* inflammation of the lung," and declares that "the pretended pneumonia of the latter was nothing more than a pulmonary catarrh with gastric and intestinal disturbance." The disease as observed by Andral, was evidently, as he himself declares, nothing more than ordinary frank pneumonia with hepatic disorder, which as Grisolle observes, is a frequent attendant on the simple form. Our reader will, however, readily agree with us that Andral's account of the open, well developed and often indomitable arterial re-action in "acute sthenic pneumonia" presents a striking contrast to that observed by any recent author in the malarial form.

4. Valleix.—Our reviewer continues, "Valleix represents *it* (the *pulse* in acute sthenic pneumonia) as generally full and accelerated and slighly compressible." But little information can be gained from this author upon the subject under discussion, but that he considered the grade of vascular excitement to be more elevated in simple than in Malarial Pneumonia, we may cite these facts from his celebrated "*Guide.*"

(*a.*) In his remarks on the "differential diagnosis between Pneumonia and Pleurisy," he states that "the febrile movement is *much more intense* than even in the latter," and again characterizes it as "one of the most *violent* febrile affections."

(*b*) In considering the "Treatment of Bilious Pneumonia," he observes that "Blood-letting should not be so much insisted on in this as in frank, inflammatory pneumonia," and in his observations on the treatment of Intermittent and Remittent Pneumonia which he does not regard as a bilious

†Ibid. 529-31.

pneumonia at all, but which Dr. Howard declares "*is the* disease in question," he does not devise any depletory measure, but simply insists on the employment of quinine.

Whatever importance may, therefore, be attached to the authority of this writer on the subject, it confirms the value and correctness of our views in regard to the diagnostic peculiarities of the pulse in simple and malarial pneumonia. Our critic, on the contrary, deems them altogether unworthy of his "distinguished consideration."

5th and lastly. Walshe.—The character of the pulse in acute sthenic pneumonia, according to this writer, is thus quoted by our reviewer: "Walshe alleges that unless when very frequent—and it may reach 140 or 160 beats per minute—it is *habitually full* and *resisting* is of much greater frequency in the mass of serious and fatal cases than in those of recovery, generally attaining its maximum frequency by the third or fourth day; but he has known pneumonia run its course, both in old persons and young adults, with a pulse never exceeding 60." As the writer declares the pulse in Simple Pneumonia to be "*habitually full* and *resisting*," our views in regard to the grade of the re-action in this variety are sustained by the weight of his authority; but as like many of the "Modern Standard Authorities," he is so little conversant with the Malarial form that it finds no mention in his pages, diagnosis, therefore, receives no further assistance from his treatise.

It will thus be seen, according to the authorities cited by our reviewer himself, that the condition of the circulation in Simple Pneumonia is decidedly phlogistic, whilst in the malarial form when alluded to by them at all, the re-action is of a more subdued character. These views are fully confirmed by others.

M. Grisolle whom, as we have seen, our reviewer terms "the greatest of all modern standard authorities on the subject of pneumonia," in his "Treatise," observes that in "Acute Pneumonia," that "the disturbance of the circulation may be regarded as a constant sympton in pneumonia.

It is revealed by the *acceleration* of the *Pulse* which at the same time increases in *volume* and *force*,"* and in his later work, he declares that the Pulse is accelerated from the commencement and in the majority of cases is full and resisting.† On the other hand, this writer who occupies such an elevated pedestal in the eyes of our critic, declares that in "Bilious Pneumonia, in all of his patients, save one, that the pulse was soft, feeble and compressible."†

M. Bouillaud states that, in "the two first periods of Acute Pneumonia the pulse is generally large, full, tense and frequent."¶

Drake, in the work which our reviewer so justly applauds, but whom we shall see sustains the most important point in our Essay, remarks in his chapter on Bilious or Malarial Pneumonitis, that the signs of an *intense phlogistic action* are *less* conspicuous in that disease than in *ordinary* pneumonitis."

From this examination, it is clearly established that the different conditions of the pulse, as regards its force in Simple and Malarial Pneumonia, were worthy of consideration, and that due attention should be bestowed upon them in framing a diagnosis between those forms of disease.

But there are other characters of the pulse in Malarial Pneumonia which render it distinctive, to which we beg attention, viz: its *diurnal* variations.

Although admitting that the fever in this disease is distinguished by a decided remittent and periodical character, and that it is very generally observed in this form of the disease, yet our critic slurs over our correct and faithful observations on the pulse in this summary manner. "It fol-

*Traité Pratique de la Pneumonie, p. 249, Paris, 1841.

†Traité élémentaire et pratique de Pathologie Interne, 7me ed. Tome. 1, 335, Paris, 1857.

‡Traité de la Pneumonie, p. 404.

¶Dictionnaire de Médecine et de Chirurgie Pratiques (en xv vols.)Tome Treizième, p. 404.

⁋Diseases, Interior Valley, N. A. p. 869.

lows then that a soft, compressible pulse cannot be deemed, at the present time, at all peculiar to that form of pneumonia which is imbued by the poison of malaria, and in that variety of the disease termed typhoid, from the predominance of the asthenic state, it is habitually soft and readily compressible."

The candid reader will here readily perceive that our critic not only erroneously and improperly suggests that we have stated a compressible pulse to be peculiar to this disease, but has totally ignored our observations on the diurnal variations of the pulse, which are usually so conspicuously marked, when its conditions, as regards its force, frequency and expansion in the chill, exacerbation and remission are compared; being frequent and small in the chill; acquiring vigor and volume in the exacerbation and diminishing in force, size and number as the fever declined in the remission. Admitting the pulse in Typhoid Pneumonia to be frequent and compressible, for let it be observed that we have not stated a pulse with these characteristics alone to be diagnostic, yet we contend that in the latter, there is not, as in Malarial Pneumonia, the same regular quotidian alteration in its frequency, force and volume. These differences in the character of the pulse, would alone be sufficient as a guide to discrimination as far as the pulse could be deemed diagnostic. We must confess it passeth our simple understanding, how the fever in a disease can be "decidedly remittent and periodical," as admitted by our critic, without the pulse partaking of the same remittent and periodical character. Yet our observations in this regard are esteemed entirely unworthy of notice by our magniloquent critic, and why? Because, forsooth, "in that variety of the disease termed typhoid, from the predominance of the asthenic state, the pulse is habitually soft and readily compressible." How charming is the *naïveté* of our critic! How zealous for truth! how hostile to error! But our reference to the dissimilarities of the pulse in Malarial and Typhoid Pneumonia did not end here, but for

the sake of brevity, we referred the reader to our article on Remittent fever for further information in regard to the peculiarities of the pulse in typhoid fever (which when complicated with inflammation of the lungs constitutes the only form of Typhoid Pneumonia we have ever observed and alone referred to) in which paper will be found this passage: (Transactions Med. Society of N. C. p. 45, 1856.)

"The pulse, though frequent in both diseases, (i. e. Remittent and Typhoid Fevers*) is attended with fluctuations so different from each other in the respective fevers as to present a most invaluable aid in diagnosis. Cullen, Parr, Good and others have declared, that in Continued fever, there are two diurnal exacerbations whilst in Remittent fever there is only *one*. We have often verified the truth of their definition, and we feel assured that in doubtful cases the peculiar character of the fever will be detected by the test. The pulse should be counted at short and regular intervals throughout the day and night. If the case is Continued fever, it will arise and decline twice, the first exacerbation occurring in the morning, and the second in the afternoon. In remittent only one exacerbation will be thus discovered."

Before dismissing the consideration of the febrile action in the forms of pneumonia which we have noticed, we finally invite attention to the most important points connected with the subject.

The remittent and paroxysmal fever in Malaria Pneumonia is *symptomatic* of the presence of the *Malarial element*, a re-action to expel the deleterious agent or influence from the organism, the *engorgement* of *the lung* being *subordinate* to the *malarial affection* and frequently *preceding* the *re-action*. On the other hand as Laennec truly observed of Simple

*Before proceeding further in this discussion, it may be well to state here, in advance of the consideration of the Pathology of Malarial Pneumonia, that we regard that disease as being primarily and essentially a phase of Remittent fever with congestion of the lungs terminating in Inflammation or not. On the other hand, Dr. Howard adopts the doctrine of La Roche and others, that it is a combination of two distinct and different diseases, viz: Simple Acute Pneumonia and Remittent fever, or to use his own words a "*true* Pneumonia complicated by the *accidental* impression of a *malarial* law."

Acute Pneumonia, "the *fever* is really *symptomatic*, that is to say, it is the *effect* of the *Inflammation*. It *rises* and *falls* with the *inflammatory orgasm*."

In Simple Pneumonia, therefore, *to arrest the inflammation is to arrest the fever*. In Malarial Pneumonia, *to arrest the fever* is to *remove the lesion of the lung*, the *localisation* of the *fever*.

In Simple Pneumonia to *subdue* the *inflammation* is to *restore* the *patient*. In Malarial Pneumonia, the lesion of the lung will not only resist forever the remedies of inflammation, but will often be increased by them.

In Simple Pneumonia, the Antiphlogistic treatment is usually the salvation of the patient. In Malarial Pneumonia, it too often has conducted its subjects to the tomb.

When our critic defiantly inquires then, "Where then is the *necessity*—what valid reasons are there—what good can result from creating it into a separate and distinct variety of pneumonia?" We answer, the *necessity* is the welfare of those who trustingly confide their lives to our care! the *reasons* that danger and death may be averted! the *good* the salvation of our patients and the elevation of our divine art! Is he answered?

The Oil of Turpentine in the Treatment of Neuralgia and Particularly of Sciatica.

Turpentine was employed many ages ago in the treatment of diseases of the nerves. It was used by Galen in the form of a plaster. Sculter exhibited it succesfully in wounds of the nerves; and Bonner had even the good fortune to cure a patient of neuralgia by the essential oil of Turpentine; but Archibald first brought it into notice as a remedy for Sciatica. Having informed Cheyne of the success with which he had employed it in this disease, the latter recommended it to Home, who afterwards published in his "Experiments and Facts," seven cases in confirmation of the practice. Since that period, Turpentine has been employed in the above mentioned diseases by many physicians of different countries.

Little benefit is to be expected from the employment of the Oil of Turpentine without due attention to the mode of administering it. It has been exhibited in various proportions, and in very different ways, but we decidedly prefer giving it internally, and in small doses of twenty drops three times a day, in order that its absorption may be more gradually but thoroughly effected.

In larger doses it is liable to occasion diarrhœa,by which its peculiar properties are rendered unavailing.

The Oil of Turpentine, when thus given in the above doses, and in some proper vehicle, such as honey, syrup, &c., produces a strong sensation of heat in the stomach, and whole intestinal tube, as well as in the diseased nerve and limb, and sometimes, it even occasions a general sweat. In certain individuals, it causes a colic or diarrhœa, and more rarely, either a dysury or an increased flow of urine. But when too large a dose is given intense colic and diarrhœa, and even vomiting supervene. Yet these formidable signs of irritation, both of the digestive and the urinary

organs, generally disappear as soon as the medicine is intermitted. In patients whose stomach and bowels are irritable, a small quantity of opium is found a useful addition to the Turpentine, by moderating its stimulating effects on the mucous membrane of those parts.

When the Oil of Turpentine is administered in the manner and quantity just described, it would seem to be particularly powerful in the removal of Sciatica. Be this as it may, its efficacy is also remarkable for curing other species of neuralgia which affect the extremities.

When we attempt to deduce from the phenomena which follow the exhibition of the oil, the mode of its operation and the cause of its being efficacious, we cannot refer the latter to its purgative, its diuretic, or its sudorific effects: since this augmentation of the different secretions is neither regular nor constant in its occurrence, and never bears any proportion to the benefits derived by the patient. Besides, we daily see patients who are purged, sweated, &c., much more abundantly, by other medicines, without deriving the least benefit; and it was this reflection which led Home to attribute to the Oil of Turpentine a specific influence over Sciatica.

Some physicians have supposed that this medicine produces its sanitary effects on the nervous system by causing a revulsion from the brain to the stomach and skin. Others, on the contrary, attribute its efficacy to a revulsion on the nerves, which is sympathetic with that of the stomach. Others, however, conceive that the stimulation which this oil communicates to the mucous membrane of the stomach is equally produced in the nerves affected, and to a greater or less degree in proportion as they are more or less morbidly affected. Which, in my opinion, serves to explain the fact that this medicine is more efficacious in severe and obstinate cases, than in mild and recent ones of neuralgia. The new modification which is thus effected in the state of the nerve would seem, therefore, to dispose it to resume its natural action, that of health.

The heat which those persons who are either cured or relieved, feel in the affected parts, seems to confirm the explanation adopted. As to the question, whether the Turpentine acts directly on the nerves by absorption, or exerts its influence over them indirectly and sympathetically, we are inclined to adopt the first of these hypotheses; and we found our opinion on the fact that this Oil is nearly always reported to fail in curing those cases of neuralgia where it produces violent purging, which is also true in respect to all other substances employed in this disease, and whose only effect is to irritate the mucous membrane of the stomach and intestines.

Its action on the urinary organs would appear to be seldom useful, but on the contrary, often injurious. This medicine is of efficacy in all cases of neuralgia affecting the extremities, and particularly in Sciatica, when this disease is simple in its character and evinces no sign that the nerve is either altered in its structure, in a state of inflammation or compressed by the formation of a contiguous tumor.

The chance of cure by this medicine is greatest, when the pain is so intense as to indicate distinctly the course of the nerve, and so obstinate in its nature as to yield to no other treatment whatever.

TEREBINTH.

UNIVERSITY MEDICAL COLLEGE, N. Y.

Interesting Case of Exhumation after Four Years Death.

Having attended my first course of lectures, and returned home to spend the summer months, I wished to obtain some bones that I might the more profitably study osteology. With this view, I proceeded to disinter a body which had been buried four years, expecting, of course, to find nothing but the skeleton; but to my astonishment, the following phenomena presented themselves. It was night, and having opened the grave, I attempted to lift out the body, but found it much too heavy for one man. Having procured help, I removed it to a convenient place, and found the extremities mouldering and ready to drop off. The trunk and viscera, however, were in a remarkable state of preservation. The thighs also were comparatively sound and on cutting into them a red serous fluid exuded, much resembling the serum of the blood. The muscles were well marked and the blood vessels could be distinctly traced. The intestines appeared to be almost perfectly sound, and the omentum contained a large quantity of yellow fat. The right lung was in a normal condition, and the air cells could be as well seen as in the recent subject; the left, however, was very much softened and disintegrated, bearing the impression that it must have been diseased before death. The heart was perfect in all its parts, and the muscular fibres could be stripped off like boiled beef. Surrounding it was a layer of yellow adipose matter, about half an inch in thickness, but I could discover none in the muscular tissue. The liver presented itself about the size of an orange and could hardly be distinguished. The kidneys were absent, or at least, I could not find them: the bladder, however, was sound and distended with gas. The rectum was filled with soft fæces which had apparently undergone no change. On opening

the skull, I found the brain reduced to a fluid state and not filling more than one-fourth the original cavity, and smelling very much like spoiled fish. The whole back of the neck was converted into what is termed adipocire. But the most curious phenomenon connected with the whole was the peritoneum. This membrane was completely detached from the abdominal parietes, and but loosely invested the viscera. It was almost complete, and could be removed in flakes several inches square. The body had but a faintly disagreeable smell, and on burning the flesh, it emitted the agreeable odor of broiled ham. Some of the bones were completely rotten and would tear out with the attachments of ligaments and tendons. The frontal suture was perfect, though the man was fifty years old when he died.

Now the questions are, what caused this remarkable preservation, and especially, why were the internal organs preserved, and the extremities decayed? There was nothing peculiar in the earth to act as an antiseptic. Why did the brain emit that peculiar fishy odor? Why was the nape of the neck changed into adipocire? I leave the last two questions to the profession; but the general history of the man will perhaps give an insight into the cause of preservation. I knew the character well: he was subject to no special disease but was an habitual drunkard from early youth. And in one of these drunken broils received a blow which caused his death. Now, was it the alcohol that prevented decay? Undoubtedly it must have been. But why the viscera and not the extremities preserved? Perhaps from this cause, viz: Exclusion from the atmosphere, and a more direct saturation with the alcohol.

I do not propose this as something new, but to an amateur it becomes a series of interesting facts.

I have the honor of submitting myself a student of medicine in the University of N. Y.

NEEDHAM B. HERRING, of N. C.

Explosive Oxide of Silver.

The attention of the profession was called in the Jour. Phar., Sept. 1858, to the "incompatibility of oxide of silver with grape sugar." My attention having also been called to it by a friend, I have made some experiments which I will submit.

Exp. 1st. I made into a pill, a few grains of oxide silver, with honey and quinine; the pill remains unchanged, as far as external appearances indicate; no cracking or charring of the box being noticed. This specimen of Arg. Ox. was procured from a reliable chemist in Philada.

Exp. 2nd. I precipitated from a solution of Argent. Nit., with Ammonia, Arg. O. and made one pill as above. I am confident that the reason fulminating Argt. Ox. was not formed, was that the Ammonia was not sufficiently strong, and did not remain in contact with the oxide long enough. The pill made from this specimen, like the first remains yet unchanged.

Exp. 3rd. With the above specimen of Argt. Ox. I made a third pill with Extract Gentian, it also remains unchanged.

Though these experiments themselves may not explain the singular explosion of pills of Oxide of Silver, noticed by so many, yet with the authorities before us, the reason is evident.

Graham says, "*fulminating silver* is a substance of a dangerous character, from the violence with which it explodes. It often explodes with unequalled violence when pressed by the hand, and it is stated on reliable authority that when dry it explodes by the touch of a feather."

*Dr. Davis noticed in his lectures, the peculiar phenomenon of which I have spoken, and thought that it was owing to the reaction between the oxide and honey.

*Dr. Davis, Prof. Anat. and Mat. Med. University of Va.

The Dublin and Edinburgh Colleges order Lime Water as the precipitant; and the U. S. Ph. orders Liquor Potassæ. Pareira tells us that N. $H._3$ must not be substituted for a fixed alkali both for the reason that an excess of the precipitant dissolves the oxide, and the danger of forming *fulminating silver*.* Dr. Butler Lane also tells us that pills made of Argt. Ox. prepared in this objectionable manner, spontaneous combustion is apt to ensue.

Hence, I consider it quite well established, that the change which pills of Oxide of Silver undergo, is due, not to any re-action between the grape sugar, the extract Gentian or mucilage, but to the spurious article found in commerce.

The facility of its preparation and the infrequency of its use as a remedy, it would be well that the physician or pharmaceutist prepare the oxide for his own use.

STUDENT.

Wilmington, Jan, 11th, 1860.

*Parerira's Mat. Med. vol. i. 3d Am. ed. p. 832.

SELECTIONS.

Practice of Medicine.

Enteric Fever.

BY JOHN RICHARD WARDELL, M. D. ED. M.R.C.P.

The subject of continued fever is one which in recent years has had bestowed upon it much patient and careful observation. The four varieties, viz: typhus, enteric, relapsing, and febricula—were formerly regarded under the first appellation as a generic term, and the differences which are now accounted distinct characterictics were not acknowledged. The doctrine of their identity was not doubted,and it has only been from data deduced from a very large number of cases that the questions of their etiology and pathology have been placed beyond the pale of dispute. It is very important that the views which have by so much labor been eliminated should be broadly known,because a right interpretration of the symptoms peculiar to each kind often involves weighty consequences, not only in the treatment, but in the prevention of their diffusion. Hospital physicians, and those practising in urban communities, where fevers are more rife, can at once recognise the particular species; but it must be confessed that there are those in the profession whose opportunities are less ample, and who from time to time experience some difficulty touching many points associated with continued fever. With regard to the essential nature of the first three forms enumerated above, there is now no longer any doubt that they are as specifically different as are smallpox, measles and scarlet fever. To this way of thinking I did not subscribe when, in 1846-7, I published a series of

papers in the *Medical Gazette*, founded on copious notes taken at the bed-side of more than 1200 cases of fever in the hospital at Edinburgh, for the establishment of the fact of the non-identity of, and other considerations connected with, typhus and relapsing fever. I then believed the enteric (typhoid) and typhus to be the same. Dr. Jenner's able monograph proved them to be dissimilar, and, too, that the enteric and relasping differ. The following is an example of the enteric form, condensed from the more extended report in my case-book, and I shall endeavor briefly to observe how its description tallies or disagrees with the other two named varieties.

On the 21st of June I was requested to see E. S. a girl, nine years of age, who was reported to be ill with fever. On the 12th she had had shivering and other initiatory symptoms. Her bowels not having been moved for three days, a mild aperient and an enema were ordered. The febrile expression was marked; in the night she had been delirious, and repeatedly endeavored to get out of bed. The eyes were suffused, the pupils dilated, and there was an exceeding deafness; she was, however, quite sensible, and correctly answered questions. Lips dry; tongue moist, centre covered with a yellowish-white fur, tip and edges preternaturally red. No affection of fauces; no pain at epigastrium. Abdomen somewhat tympanitic, and a gentle pressure at the iliac fossa gave the transient expression of pain. No gurgling. Ausculation discovered no signs worthy of note, nor was there any dullness over any part of the thorax. Pulse 132, weak; respiration accelerated. On a cursory review of the case, it was evidently one of enteric fever. The small, circular, rose-colored spots, acknowledged as the distinguishing diagnostic marks of that disease, could not now, after a very careful examination, nor at any subsequent date of the illness, be discovered. The head was shaved, cold applied, and wine, beef-tea, and a diaphoretic mixture were ordered.

June 23rd.—A feculent stool followed the third dose of a rhubarb mixture. Tympanitis increased; pulse 130.

24th.—She tried to get out of bed during the night. Eyes suffused; pulse 138, but of a larger volume; tongue moist and almost clean.

27th.—She is not so deaf; pulse 120; belly still resonant, and feels dry and harsh.

For some days afterwards the report of the case presents no facts worthy of relation. She slept better; tongue and lips were moist and clean; she was quite collected whenever I saw her; and the bowels were moved once a day, either spontaneously or by enemata. The urine from the first had been voided in normal quantity. Two small ash-colored patches appeared on the mucous membrane of the upper and under lips, which readily disappeared after being touched with a piece of alum.

On July 9th, the pulse counted the lowest to which it ever fell, 116; and I hoped she was now in a fair way of recovery, although she was by no means in the apyrexial condition.

On the morning of the 12th, there was an increase in the febrile expression; the skin was hot and dry; the abdomen more distended; pulse 134.

17th.—The pulse had risen to 140, small and compressible; very deaf; tongue and lips moist and clean. Wine, during the last four days, had been increased.

18th.—Much worse; lay on her back, and down in bed with knees up; considerable tympanitis; tongue moist and clean; eyes blanched, and the features had begun to sharpen. At intervals complained of pain in the abdomen. Quite sensible and answered questions correctly. A mixture, with chloric ether, ammonia, and camphor, was prescribed, and wine and beef-tea given every hour. Pulse 144, small and thready.

19th.—Pulse 140; tongue moist; enema produced a dark feculent dejection; urine passed normally. From this time she obstinately refused to take anything except cold

water. The heart's action became more and more feeble, systolic sound brief and sharp, the face more pinched, the skin cold and clammy, until she died, in the evening of the 24th, the forty-third day after the rigors, headache and general indisposition had come on. During the last five or six days of her life there were, daily, sickness and vomiting. The pain in the abdomen was not so marked at the close as to make me suspect perforation. She sank from asthenia. There had never been the least tendency to diarrhœa, nor any loss of blood per anum. Until within a few hours of her decease she was rational; and up to the last twenty-four hours she could partially turn on the side. There was no smell of putridity, no sore or excoriation on any part of the skin, no subsultus, no picking at the bed-clothes, and the sphincters retained their functions almost to the close.

I did not press for a post-mortem examination, because is was so evident that the chief lesions would be the ordinarily-seen ulceration of Peyer's patches, and because that morbid appearance in this form of fever has so recently been ably and in full detail described by Dr. Tweedie, who, in his clear and comprehensive Lumleian Lectures, has illustrated this pathological condition.

After a series of questions put to the mother relative to the mode of invasion, the particulars elicited were not so pathognomonic of the enteric as occurs more frequently. It begins more insidiously than typhus, and much more so than the relapsing. In the latter the attack is sometimes quite sudden; a person may go to bed comparatively well, and in the morning be seized with shivering, headache, pains in the limbs, and other symptoms. There is less dullness and stupidness in the enteric than in typhus, in which the great nervous centres seem prone to be more readily impressed, as if the poison at once affected animal life. It is quite true, however, that all forms of continued fever in the symptomatology of accession present much in common, and under an experienced eye, it is often difficult during

the first few days, or even until the rash appears, to arrive at a decided diagnosis. In typhus, the muscular system evinces great prostration, not only at the first, but throughout the disease; as a rule, the patient lies helplessly on his back. In the instance given, she could turn herself in bed, and lie on the side up to a short time previous to dissolution. Again, the intellectual faculties were comparatively little disordered. During the night there was some wandering delirium, as evinced by repeated efforts to get out of bed; but in the daytime she was up to the last quite rational. The moment I entered the room she always recognized me, and, when she could be made to hear, correctly answered questions. The deafness came on early and it varied much; some days she was very deaf, on others slightly so. This symptom is common to both typhus and enteric, and regarded alone, it does not importantly affect the prognosis. Dr. Jenner has noticed that in the enteric type patients have a greater tendency to "get out of bed" than in typhus; the delirium is of a more vivacious kind; they are less easily restrained. In many cases the delirium does not come on until the second or third week; when it does in the first week, it is to be looked upon unfavorably. In typhus, it supervenes before the end of the first week, when it increases, and in fatal cases ends in coma. In relapsing fever there is comparatively little delirium and head complication. On reference to my own account of that disease, in one table giving particulars of 450 cases, leeches were applied to the head, on the average, to 1 in 6-62; in another set of 80 cases it was a predominating symptom in the small proportion of 1 in 11-42. According to Louis, the brain and its membranes of those dying of the enteric rarely present any such marked appearance as might be deemed of potential consequence entering into the causation of death. To those who have had considerable experience in morbid anatomy, it is well known that the encephalic mass gives little explanation of the essential nature of continued fevers. A small amount

of sub-arachnoid and ventricular effusion, a pinkish blush of the cortical substance, or it may be a few puncta in the centrum ovale, constitute often the entirety of morbid phenomena, and I have repeatedly examined this organ when it evinced no lesion. Even coma may not be traced after death. There is no doubt that the views enunciated by the late Dr. Clutterbuck and those professing similar opinions—regarding fever to consist of inflammation of the brain—led to much mischief in practice, and that a more correct pathology (which is, it cannot be denied, an approach to the once widely received and then discarded humoral doctrine)has been succeeded by a more successful mode of treatment—viz., that treatment which as far as possible dispenses with depletive measures, which is more expectant and conservative in its aims, and which, by having a just relation to a set of morbid actions not primarily located in any single organ or separate tissue, but pervading the entire organism, opposes asthenia. The late Dr. Allison, whose clinical assistant I was, and whose practice I carefully observed, used to dwell with much emphasis upon the Cullenian maxim of "averting the tendency to death;" and although he did not carry the wine and brandy remedy to the extreme which by some it has latterly been advocated, yet he had long seen, with much sagacity, that acute diseases, and more especially fevers, had, from some subtle and inexplicable cause, become less sthenic in their nature, demanding remedies which in previous years were accounted inapplicable or decidedly prejudicial.

Those organs and surfaces which are of an eliminative, a depurative, or defecating character—those emunctories and outlets whereby the products of organic waste and effete matters are carried off, are precisely those which are most liable to become affected in the progress of fever. That poison which by a most rapid multiple has so vastly increased as to contaminate the whole of the circulating fluid, in obedience to certain vital laws inherent in the organism, by such channels becomes expelled; hence, ac-

cording to the power of such agent, the excess or defect of function of such organs and surfaces; and thus it is that the skin, the mucous membranes, and the parenchyma of secernent viscera more especially manifest the effects of the specific poison. Ancient theory and every-day facts convince us of those conservative qualities which the system possesses, whereby it essays to eject what it cannot assimilate, and to get rid of such noxious matter as it may have contracted. In the exanthemata, the skin and the mucous membranes of the air-passages are the chief seats of its determinations; in enteric fever, the pustulation is in the digestive tube, mainly in the ileum; in typhus, the mulberry rash evinces an effort made at the superficies to throw off the poison; and in relapsing fever, the powerful diaphoresis, which so frequently at once resolves the fever, inculcates the same doctrine. It now being conceded that the three eruptions peculiar to the respective types of continued fever, are as pathognomonic of those varieties as are the eruptions in the exanthemata, properly so called, it would really seem that it is merely an arbitrary distinction on the part of systematizers and compilers of nosology, whereby they are differently arranged. They all have many features in common; they all originate from peculiar morbid poisons, requiring a greater or less period of incubation; they all pass through a certain train of febrile phenomena; and in all the great centres of animal and organic life, are in varied degree affected. Again, there are many points of resemblance in the complications which arise, in the demand of treatment, in the sequelæ, and in the phenomena of the fatal issue.

If we were to make a hasty comparison between small-pox and spotted typhus, how many characteristics they manifest of a like nature, still unquestionably caused by poisons, with which like only produces like. Both originate from peculiar poisons, are contagious, require a certain period for devolopment, are diseases in which the prime agent specially operates upon and multiplies in the blood;

in one the eruption may be looked for on the third, in the other on the sixth day; in both are all the pyrexial symptoms, as a quick circulation, high temperature, furred tongue, anorexia, diminished secretions, and a great impress is made on the nervous system; in each organic complications of the inflammatory kind may arise; there is delirium and often coma. In the one form, death mostly takes place on or about the eleventh day; in the other, rarely till after the twentieth; and both may have sequelæ attacking the same organs and tissues. And similar comparisons might be drawn between two types taken from continued fevers and the exanthems. Although human reasoning cannot say why it is that in one variety the pustulation is in the intestines, in another in the skin, yet accumulated observations have long shown that between the skin and the mucous membrane of the digestive tract, there is a peculiar sympathy, and that between the enteric and variolous phenomena many of the fundamental symptoms exemplifying no slight or casual features of resemblance.

Dr. Kennedy, of Dublin, in a paper read before the Medical and Chirurgical Society, propounds the doctrine that typhus and typhoid (enteric) are mere varieties originating from the same poison. Of relapsing and typhus I can speak with much certainty. Sixteen years ago I maintained from very elaborate data their distinct essence, and such doctrine still holds good. In more than 1200 cases I never saw typhus and relapsing blended. The infection caught from one fever never produced the other. Like always produced like in a multitude of instances. I have given in my papers thirty-two cases, in which the two forms succeeded each other within a short space of time. Seventeen out of the thirty-two who had passed through the relapsing, contracted typhus during convalescence, or within the brief period of three months. The proofs of the non-identity of their essential cause were as clear as the common-sense proofs we have, and as practice ever tells us, of the non-

identity of small-pox and scarlet fever. If typhus differs from the relapsing, why may it not differ from the enteric.

With regard to the moisture and cleanness of the tongue, as reported, Louis notices the same. In the 40 cases which he gives, in one-half it remained moist. In typhus, it sooner becomes brown and dry, and sordes are common. In the relapsing, it is much furred, but moist. There was tympanitis at my first visit. This symptom is, of course, from gas in the colon; and when liquid is there also, gurgling is heard. The absence of diarrhœa is well nigh always present. It occurred in 37 out of the 49 cases of Louis; and Drs. Tweedie, Jenner, and Wilkes regard its presence as the rule. In typhus, meteorismus and diarrhœa are rare; the belly is generally flattened or drawn in; and harass of the bowels is not spontaneous, but an incidental and seldom-observed circumstance. In the relapsing fever, in 450 cases I found diarrhœa to average 1 in 6.25: but 1 in 1.65 or 10 out of every 16, had urgent nausea or vomiting. When vomiting comes on in the latter part of enteric fever, ulceration of, or a changed condition in, the mucous membrane of the stomach may be suspected. According to Carpenter and other advanced physiologists, the intestinal glands are outlets for the impurities of the blood. If such be the fact, the proneness of the agminate glands to disease in the enteric form can better be accounted for. Rokitansky gives an elaborate account of the pathological changes undergone by these organs in the fever considered. He says there are four stages—one of blood stasis or congestion, a second of typhous process (infiltration of deposit), a third of softening, and a fourth of ulceration. The lower third of the ileum, and around the cæcal valve, are the parts most affected. I remember making many examinations of the digestive tube of patients dying in fever when I was assistant in the pathological theatre at Edinburgh, and such was the fact. These were then regarded as illustrations of *typhus*, the difference between it and the enteric not having then been demonstrated. I never saw ulceration in the

intestines of those who died from the relapsing. So long as the typhous dyscrasia continues, thus long will the disease of these glands be maintained. The diarrhœa which ushers in the close of phthisis is accompanied by ulceration of Peyer's patches. I was much struck with the general resemblance of this patient to the appearance of those dying in phthisis. A casual observer might almost have mistaken her affection for that complaint. It is seen that the pulse never fell to the non-febrile standard. From first to last, the skin was never moist, but of dry, harsh feel, and of exalted temperature. The pulse was one day 116; it varied, seldom being exactly the same on consecutive days. Irregularity of the pulse is pathognomonic of the enteric. In typhus, when the pulse reaches 130, the case is generally fatal. In relapsing the pulse might be exceedingly high without indicating danger. The death of E. G—— occurred at a protracted period—the forty-third day. Of twenty-five fatal cases given by Dr. Jenner of typhus, nine died on or before the fifteenth day—not one after the twenty-second. The same authority gives the twenty-second as the day mostly fatal in typhoid (enteric,) and the fourteenth as mostly fatal in typhus. In idiopathic peritonitis the intellectual faculties keep unclouded almost to the last. The great sympathetics are potently affected, and the proximate cause of death is increasing debility of the central organs of circulation. The fatal phenomena are exerted on the action of the heart. In the enteric fever, the decrease of power in that organ demands watchful attention; the patient sinks from asthenia—hence the imperative need of stimulants.

Some writers on fever have latterly maintained, after much labor touching the etiology of continued fevers, that the enteric is always very intimately associated with some local cause. I do not, however, here enter into that vexed question as to whether malaria can or cannot of *itself* constitute a sufficient cause. I doubt that doctrine. Nor do I agree with Dr. Budd, of Clifton, that the germs of the enteric are

always conveyed by the drains. I may here hastily mention that a nightman of this place informed me he had been sixteen years thus occupied, yet never had fever. Again, he added that he could instance names of a dozen other men who for long periods had thus been employed, but he never knew one to have fever. No one, however, can gainsay the fact of bad drainage being one main element entering into the causation of fevers. The family of the deceased, whose case I have related, came to reside at Tunbridge Wells, six weeks, prior to her attack. The cottage in which they live is one of a row of new, well-built houses, thoroughly ventilated, and situated in an airy, open, dry, well-drained street. The rents vary from £11 to £12, and none of the occupants can be classed with the poor. I was astonished to hear of the many cases of fever which from time to time had occurred in these houses, and felt certain of some local cause. I found that at No. 1 a family had resided five years, and four of the inmates had fever. At No. 2 there had been six fever illnesses in nine years. At No. 3, the husband had fever some few years ago. At No. 4, where the deceased died, a young man was very dangerously ill of the same disease three years since. At No. 5, a girl had had fever, and it was reported their predecessors had it. At No. 6 I could hear of no case. At No. 7, two years ago a girl of sixteen and a boy of twelve, had "low fever;" and, within a few months, a woman of twenty-six had "typhoid fever." I was told it had often been remarked that "fresh comers" took fever. Behind the buildings are several strips of garden ground, and in each a privy. From the privies runs a deep drain, through a sandy shale; and within a few feet of this drain is the pump-well. The well-water had long been complained of, and, after heavy rains, it was said to have a bad taste. The town surveyor, who made an inspection, told me he believed it very probable that the matter from the drains might percolate into the well. He recommended the well to be filled up. In the next set of premises is another well, supplying two other houses. I made inquiries, but could not learn of

any inmate ever having fever in these two dwellings; but they always used water from their own pump, and never from the pump common to the seven houses. The chief cause of the diffusion of typhus is destitution; for proof of which I would refer the reader to the records of Scotch and Irish epidemics. In relapsing fever, of 436 cases, 81 were in partial work, and 301 were destitute. The relapsing fever cases at Edinburg and other large towns in Scotland, were in a less relative proportion in the ground-floor houses, whose occupiers were mostly little traders, and in comparatively better circumstances, though, of course nearer the drains than those above them; but in the upper flats there was by far more poverty, and, consequently, far more fever.—*London Lancet.*

Diphtheria, and its Treatment.

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Diptheria is by no means a new disease, as many are in the habit of styling it, for the curious in medical literature will find it described in writings dated as far back as the sixteenth century; and the probabilities of its existence long prior to that time, are certainly very strong. Owing, however, to the imperfect knowledge of pathological anatomy among the earlier writers, its anatomical characters were but imperfectly described: while it suffered, at their hands, the fate of being confounded with other diseases of the same class. Indeed, among our own writers this confusion obtains to a very considerable extent, as sundry discussions, on this subject, before some of our academies of medicine amply testify—where Professors and others who are looked

up to as the great lights of our science, have followed almost in the very footprints of the earlier teachers in medicine.

There is no denying the fact that this disease has been forced into a scientific alliance with *Cynanche Trachealis*, and while I strongly doubt the propriety of this confusion, I readily admit, that so truly difficult is a correct diagnosis in numerous cases—one that can authoritatively indicate a marked and unmistakeable difference between the two diseases—that many, myself among the number, have sometimes fallen into the fatal error of assuming one for the other. The only consolation I have found, when too late to remedy the error, was, that I was not alone in the false treatment, assumed as the best. In truth, the mortality of diphtheria is not so much owing to its fatal and death-dooming character *per se*, as it is to the too frequent employment of debilitating remedies based upon an incorrect rendering of the complicated symptoms offered for inspection. I feel that in advancing this assertion, I am venturing on dangerous ground; but I fear that if I have been bold, not a few of the Profession will admit that it has been on the side of truth,

Guersent, Bretonneau, Laennec, Cullen, and a host of high authorities have noticed this form of angina, but as at the present day, it has been considered as merely a more malignant type of another disease. Under the terms *cynanche maligna—plastic pharyngitis—diphtheritica maligna—angine gangreneuse—diphtherie—angine couenneuse—ulcerated sore throat—putrid sore throat—black tongue*, &c,, it has been known, and described, in part, but nearly, if not always, in connexion, as above stated. Medical works on anginose affections are certainly numerous enough, but notwithstanding this, there seems to be a desire among practitioners to-day for more, if not better, information on the subject. My experience has led me to arrange all the cases of diphtheria which I have treated or witnessed, under two heads, viz. *Sthenic* and *Asthenic*. This is a simple classifi-

cation, and yet I have found it comprehensive enough to embrace every variety which has fallen under my notice.

In the *Sthenic* form there are no *premonitory* symptoms, or if they exist, they are always of very short duration; and this might in many instances be held true of the stage of *invasion*, for there are cases in which the affection steps, as it were, at once into the arena, in all its force and violence. More commonly, however, the invasion is marked by rigors and flushes of heat, following each other in quick succession, until the whole surface of the body becomes intensely hot, and the fever is fully developed. The first alarm may be a cough, or not; the pulse is full, vigorous, and hard, sometimes irregular; the tongue retracted, coated little or much, with clear red tip and edges; the fauces, tonsils, velum palati, and the lateral arches are generally red and inflamed; the uvula elongated at times, so as to cause a suffocative cough; not unfrequently one or more white spots will be discovered on the tonsils—frequently not; the eyes are usually sensitive to the light, suffused and brilliant; the bowels torpid; the urine small in quantity, and high-colored; albuminuria is not always present; the brain is unimpaired, and the whole train gives evidence of vascular irritation, with increased action. In the formidable varieties of this type, encephalic disturbance supervenes before the pseudo-membranous exudation is formed, and coma, convulsions, and death ensue; or the vital energies are prostrated, and the patient sinks rapidly into the typhoid condition. In this variety the invasion is sudden, the disease attacking the subject while in the full enjoyment of health, and for the most part selecting for its victims the plethoric and robust.

In the *Asthenic* form, the stage of invasion is always preceded by those peculiar premonitory signs which characterize this type of disease, viz. lassitude and weariness, occasionally diversified with a temporary rallying of the genal powers; loss of appetite; pale and dejected countenance; eyes dull and lustreless; there may be some complaint of

soreness in the throat towards evening, and a cough may be present, but the efforts of coughing will be accompanied by all the phenomena indicating pain in the region of the throat; not unfrequently there is little or no complaint of soreness, until the stage of invasion sets in, and terminates this general feeling of malaise, by the usual chills and hot flushes running on, until pyrexia is established, generally in from five to twelve hours. There is then increased action, constituting the stage of excitement, but this speedily subsides, and the typhoid character of the malady is evident from the nervous disturbance. Remissions sometime takes place towards morning, but our guide must be the irritation with *decreased power of acting*, the vital forces seeming to fail from day to day; and then we will hardly fail of recognising the adynamic tendency of the subject. The local symptoms in this form are not always alike; one or both tonsils may be marked with white or greyish spots, surrounded by inflamed edges; there may or may not be a ropy mucous in the mouth, hanging like a film from the roof of the mouth to the tongue when examined; more often there is a considerable fetor of the breath; the efforts to swallow are painful; the glands of the neck, more particularly the submaxillary and parotid, will be swollen, and hard and painful to the touch; the fauces will be inflamed, and the appearance of the throat generally gives evidence of inflammatory action. Ususally there will be found in some, or all of its parts, patches of concrete exudation and streaks of the same, surrounded with the usual red edges; the pulse is rapid, weak and irregular; and occasionally there is an exanthem over portions of the body. As the disease advances, the prostration increases, the pseudo-membrane may extend, and give a croupal form to the disease, and death may result from asphyxia; or the exudation may be so slight as not to embarrass the respiratory organs at all, and yet the patient may sink into a hopeless coma, and death terminate the scene.

Both these forms of attack are subject to modifications,

and I have witnessed cases in which there was no febrile reaction at all, the system remaining oppressed throughout the whole disease ; the vital energies being literally overwhelmed from the first moment of attack, sinking the patient steadily until vital action ceased altogether.

It has been from a careful observance of the foregoing constitutional as well as local symptoms, that I have based a treatment upon the "*febrile character*" of this disease, and assumed a division, which in practice has resulted as favorably as I could have desired. The "initial treatment," if you will grant me the expression, is of the very utmost importance toward a favorable termination, and should ever be the result of a careful discrimination between the two forms of attack I have so hastily sketched. It is when first called to the bedside of a patient suffering from diphtheria that we are most apt to make a *faux-pas*, and not unfrequently, too, an irretrievable one, for the case which demands sustaining treatment will scarcely admit of any debilitating measures, and *vice versâ*.

In the treatment of the sthenic form of diphtheria constitutional as well as topical remedies are of the utmost importance. There are three principal indications to fulfil ; 1st, to reduce the momentum of the circulation ; 2d, to remove any acrid or irritant matter which may produce undue excitement ; 3d, to restore the secretions of the liver, kidneys, and skin.

The first indications can very readily be accomplished by a careful administration of Norwood's fluid extract of veratrum viride—never pushing the doses to emesis—or the use of the lancet in a bold manner at the first bleeding, always opening a large orifice, and obtaining a full stream ; frequent abstractions of blood are to be deprecated. The second is obtained by the use of sulphate of magnesia combined with minute doses of antim. tart, or the citrate alone, or jalap and pot. bitart. To restore the secretions the cautious use of calomel combined with ipecac, the warm bath, and spts. ether. nit., will answer every purpose. The topical treatment consists

for the most part of insufflations of powdered burnt alum, and the removal by any means of the pseudo-membranous exudation, if it exists. Touching the patches with muriatic acid has sometimes proved highly satisfactory ; but I never make use of gargles unless the mucous membrane of the throat is extensively implicated, and then I use a strong solution of argent. nit.

Let me here urge the imperative duty of the physician to watch the disease constantly, for the whole character of the malady may suddenly change to a typhoid of a low and dangerous form; and the patient may sustain irreparable injury from the hands of some kind-hearted nurse, in whose care are the remedies adapted to the inflammatory stage. Warning and frequent visits can alone avert a mistake at this period, for it is now that the real skill in medication is demanded, and upon a correct appreciation of the symptoms the life of the patient depends. If with the subsidence of the sthenic type of the disease, there appears a typhoid tendency, with prostration, we should not hesitate to sustain the patient; although the pulse be rapid, its volume will be found far below its standard, and unless prompt and efficient aid is afforded nature will sink and the patient die. Tonics are sometimes inefficient to answer the end, and I have had to resort to stimulants. Madeira wine I have found the best. Of the tonics, muriated tinct. of iron and bark, or its alkaloid, the sulphate of quinia, are the best; strychnia and iron also form an efficient and powerful tonic. If we follow the general rules of practice in the case of a typhoid patient, our success will be insured.

In the asthenic form of diphtheria the general rules of treatment will be based upon the stage in which the patient is found. If called during the premonitory stage, which is almost always of considerable duration, arouse the secretory powers of the principal organs by the use of the usual means; and if possible, to secure healthy secretions before the accession of the stage of excitement, use quinine and iron as a prophylactic, and introduce chlorate of potassa

into the system freely to disinfect the blood, for I regard diphtheria as essentially a blood-poisoning as our most malignant typhus. In the stage of excitement, moderate the force of the circulation, but be careful not to destroy the tone of the stomach Keep it intact, if possible, for with the first signs of nausea the disease resumes a more dangerous character. The septic tendency will indicate the free employment of disinfectants, as chloride of lime, in the apartment where the patient lies. The clothes must be frequently changed; the bath, warm or tepid, according to the condition of the heat of the body, should be employed occasionally to restore the function of that important organ, the skin, and also for the sake of healthful cleanliness; pure air is all-important. When the pyrexia ceases, and the work of prostration begins, meet the indications with stimulants or tonics as the case may require.

Of course the local difficulties of the throat will need early and assiduous attention. Insufflations of powdered burnt alum, every one, two, or three hours according to the urgency of the case, and the steady and frequent removal of all appearances of plastic exudations, whenever it forms, so as to give the alum a fair opportunity of reaching the seat of disease, I have found usually sufficient. Touching the spots with nitrate of silver was a favorite plan with me, but I have abandoned it for the use of alum. I am convinced of the great and paramount importance of the frequent use of these insufflations, in cases where the membranous deposits form rapidly, from experience. If the larynx becomes involved the danger is increased an hundredfold, and *it must be prevented* by this treatment; even this, however, will fail sometimes, and then the method of producing a separation and expulsion, by the use of emetics, as practised in croup, comes foremost to the mind; but I never practise it; fear of disturbing the stomach prevents me. Instead of emetics I use a feather, or other convenient instrument, wherewith to procure such titillation of the fauces as will cause coughing, and the same expulsive efforts as ensue from emesis, without

its debilitating effects. But this too will fail, and asphyxia seems imminent. What then should be done? Would any sane practitioner hesitate to announce to the relatives and friends of the patient, the importance of the sole remedy left? I grant that this is a fearful ordeal for the physician as well as the patient, but I would not deny them the only resource which remains when this moment arrives. Tracheotomy is the *dernier resort*, and let it be done, hopefully and with confidence; but do not delay until the membranous deposit lines the bronchi. The exact moment of election must be left to the discretion of the attending physician, but I would advise that it be done early. Twice in my practice I have performed it, once only successfully; but I think that the first case was operated on too late.

Convalescence from diphtheria is fraught with danger, and requires the enforcement of all the attendant's orders; it is tardy, occupying not weeks but months, and throughout the sustaining treatment must be followed.

Finally, let me say, I believe this affection to be *contagious*. I think that I am safe in asserting that I *know* it to be so. Let then the family physician, when called to such cases, warn the parents of the fact, and he will, in fulfilling this duty, perchance save the lives of some of the family.—*Am. Medical Times.*

Uræmia.

A paper on this subject was read before the Medical Society of London (Nov. 5, 1860,) by Dr. RICHARDSON. He first pointed out the analogies which exist between uræmic poisoning and poisoning by certain common narcotic substances, such as opium and belladonna; and then passed to the description of cases in which sudden symptoms of uræmia had terminated quickly in dissolution. Thence proceeding to the diagnosis of uræmia, he passed through each phase of the disorder, particularizing the symptoms with much care. Three points in this part of the paper may be mentioned as of interest. The pupil, Dr. Richardson has observed, is usually fixed in uræmia, and in most cases is dilated; but, he added, this rule is not without exception, for he has seen the pupil contracted to a pin's point in a case of unmistakeable uræmia. There is in some cases, as Frerichs has said, evidence of and excess of ammonia in the breath during the acute attack; but this is not universal, and hence some have denied it altogether. The reason of a difference in this respect in different cases is very simple. In persons suffering from kidney disease, and in whom uræmia is a probable occurrence, the breath at the best of times is charged with ammonia to an extent greater than is normal. In these cases the lung is supplementing the kidney, and the elimination of the ammoniacal product is, in fact, the saving clause. It is when such persons take congestion of the lung, and are subjected to diminution of excretion by the lung, that the uræmic symptoms advance; and in these cases the breath is not ammoniacal during the attack. But there are other examples, where the uræmia is sudden in its appearance, owing to sudden arrest in the function of kidney simply. Then the breath is markedly ammoniacal in the period of the acute attack. The third fact, as diagnostic of uræmic pois-

oning from poisoning by the ordinary narcotics, is, that during uræmic coma the patient will often rally and regain all his consciousness for a time, sinking again into forgetfulness, and even dying unconscious in the end.

The cause of death in uræmia formed the matter of another section of the paper, and was followed by observations on treatment. In the treatment of uræmic narcotism coming on suddenly, in a person not debilitated by previous disease, and not overloaded with fat, Dr. Richardson stated his belief that there was one ready and direct remedy, and that was free bloodletting. He had seen a man who had lain three days comatose and unconscious recover, under the immediate influence of loss of blood, so completely as to transact business affairs, and inquire into all that had occurred since he was struck down. Moreover, physiological reasons supported this treatment; for the bloodletting not only relieved the body from a portion of the poison, but removed the congestion of the kidneys and of the other organs, and gave the permit for recovery, if recovery were possible. Thus, in animals in which artificial uræmia had been produced, the effect of frequent venesection tended greatly to prolong life. That blood-letting should not absolutely relieve in every case was reasonable, for whether relief was obtained or not in any case, would depend upon the degree of mechanical obstruction in the kidney; for if the obstruction were perfect, no treatment would be possible, seeing that no proceeding could be adopted to supplement the kidney altogether; but if in any instance there should be but partial obstruction, increased temporarily by congestion, then the act of abstraction of blood gave the only chance that remained of removing the burden from the excreting organ. The last part of the paper dwelt on uræmia in its forensic aspects. In many cases where death is supposed to have occurred from the effects of small doses of opium or other narcotic, he (Dr. Richardson) believed that the cause was attributable to uræmia, and that so-called idiosyncrasies were probably intimately connected with renal disorder.—*Lancet*, Nov. 17, 1860.

Surgery.

Rodent Ulcer.

Jonathan Hutchinson, Esq. Assistant Surgeon to the London Hospital, has published in some recent numbers of the *Medical Times and Gazette*, a very interesting statistical report of forty-two cases of rodent ulcer, or Jacob's ulcer as it is also called. The following are Mr. Hutchinson's deductions in regard to this affection:—

"1. That there occurs not unfrequently on one or other part of the face a form of ulceration which is characterized by an indurated edge, and by a tendency to spread to adjacent structures, without regard to difference of tissue; which is very slow in its progress; does not cause much pain; does not induce cachexia, and is never followed by enlarged glands or deposits in the viscera.[1]

"2. Sections of the indurated edge of this ulcer (or of the portions of new growth which are sometimes produced

[1]In making this assertion I am borne out by all the facts hitherto recorded. Fully acknowledging, however, the near relationship of rodent ulcer to cancer, I have but little doubt that it will now and then so far deviate from its usual course as to affect the glands, and quite anticipate in the future to hear of such a case. Epithelial cancer may be said to almost never affect the internal organs, yet a few cases are on record in which it has done so. Such exceptions, however, only prove the general rule; and just as the epithelial cancer very exceptionally affects the viscera, so will rodent very exceptionally affect the lymphatics. Professor Langenbeck has mentioned to me a case in which he excised a rodent ulcer from the side of a woman's nose, who afterwards remained well for nine years, and was then attacked by cancer of the uterus, followed by secondary growths and death. Such a fact is, however, very different from one in which the cancerous infection should advance, as in other malignant disease, through the lymphatic system, from the original ulcer.

about it) do not exhibit the cell-structures met with in epithelial or scirrhous cancer, but only those of organizing fibrous tissue.

"3. This ulcer differs from lupus exedens in that it never occurs in the young, and never gets well spontaneously, while lupus exedens but rarely begins after the age of thirty, and usually tends after the lapse of time to cicatrize spontaneously. The two, also further differ, in that lupus has a tuberculated, inflamed border, without any great degree of induration; while the edge of the ulcer in question presents an extremely indurated ridge, without tubercles, and compartively free from inflammatory congestion.

"4. The ulcer in question differs from cancer in that there is but seldom present any tendency to the production of new material, that it never causes the glands to enlarge, nor induces morbid growths in the internal viscera.

"5. Although it must be freely admitted that this disease is closely allied to cancer, and that in its inveteracy under treatment, and its tendency, if not removed, to spread deeply and extensively, it well deserves the designation of 'locally malignant,' yet it is inconvenient in practice to call it 'cancer of the skin,' since there are other forms of cutaneous cancer (the epithelial, scirrhus, melanotic, etc.) essentially different from it, and of a far higher degree of malignancy.

"6. The term 'a peculiar ulcer occurring in the eyelids,' is too vague, and also involves an erroneous statement as to uniformity of location, an objection which, also, in addition to what has been stated above, applies to "cancer of the eyelids,' since this ulcer is met with on many other parts besides the palpebræ.

"7. To the designation of rodent ulcer given to this disease by Lebert, and adopted in this country by Paget (see *Lectures on Surgical Pathology*) no objection applies, excepting that it is more vague than desirable. Of those in use it is certainly the best, and should the disease become

generally recognized by the profession under that name, the vagueness of its meaning will by custom soon cease.

"8. The rodent ulcer is most commonly met with between the ages of 50 and 60, and is equally frequent in the two sexes.

"9. It occurs but very rarely on any other region than the integument of the face, and is most common on the eyelids.

"10. It is a singular and very significant fact that no case has yet been recorded in which the rodent ulcer attacked the lower lip, either primalily or by extension, while that part is well known to be a very frequent seat of epithelial cancer.

"11. The *diagnosis* of rodent ulcer is usually easy. An ulcer with a hard sinuous edge, situated on some part of the skin of the upper two-thirds of the face, of several, or perhaps, many years' duration, almost painless, and occurring in a middle-aged or elderly person, of fair health, and without enlarged glands—such a sore is almost certain to be of the rodent type.

"12. The *prognosis* of rodent ulcer varies with the stage of the disease and the treatment it is intended to pursue. If left to itself it will slowly but surely advance both in extent and depth, and will probably destroy the patient's life in the course of from ten to twenty-five years, death being eventually produced by the exhaustion consequent on suppuration, hemorrhages, pain etc., and very probably aggravated by inability to take sufficient food owing to the diseased state of the mouth. If the case be seen in an early stage while complete removal either by knife or escharotics is practicable, a favorable opinion may be given as to the probable non-return of the disease. The younger the patient the more rapid will be the course of the disease, and *vice versa;* and the younger the patient the more nearly is the disease allied to cancer, and the more likely to recur after removal.

"13. The only *treatment* which the rodent ulcer admits of is local, and the best is that which obtains its freest removal with the least injury to the parts concerned. In some localities, and in some stages, escharotics, such as the chloride of zinc, may be advisable, but in most excision and transplantation of skin is the more certain and satisfactory.

"14. A widely-diffused knowledge of the true pathology of rodent ulcer may be expected to result in considerable advantage to the sufferers from that disease, since it will encourage to the early and free adoption of local measures and to the employment of incision and transplantation even in some cases which, if considered cancerous, would certainly be beyond relief by surgical art."

The following further remarks on the treatment may be quoted:—

"The rodent ulcer is to be viewed, as far as our knowledge extends, as a local disease, which spreads by continuous growth. There is not a tittle of evidence in favour of our belief that it can be influenced by internal medication. The object which the surgeon must keep in view is to remove the whole of the diseased parts, and to procure a soft, supple cicatrix. If there be any tension on the cicatrix, the irritation thereby induced will be almost certain to induce a relapse of the disease. By means of deep escharottics, such as the chloride of zinc, complete destruction of the diseased parts may in many instances be insured, and a very healthy and pliant cicatrix is usually obtained by this remedy. In many of the favorite seats of rodent ulcer, the eyelids to wit, the use of escharotics is very inconvenient; and in these free excisions, followed by the transplantation of healthy skin from the forehead, cheek, or temple, is the best measure. The details of such operations will vary with each individual case, and do not form part of our present report."—*Am. Journal of Med. Sciences.*

Painful and Irritable Ulcers.

BY JOHN HILTON, ESQ., F.R.S.

I promised, Mr. President, before concluding these lectures, to refer to some cases occurring in the practice of a surgeon, which shows the good effect of "physiological rest," and as yet I have scarcely had any opportunity of alluding to the subject. The only exemplification of the principle of "physiological rest" as a curative agent which my time will admit of my using is that of the painful irritable ulcer. An irritable ulcer is to be distinguished from an inflamed ulcer, no doubt, by the quantity of lymph which is poured out upon the inflamed ulcer, and the high degree of its temperature. Irritable ulcers, as we know, are exceedingly painful, and sometimes very difficult to cure. As far as I have been able to detect their real essential pathological character, it depends upon the exposure of a nerve on the surface of the ulcer. Of course it is quite clear that every ulcer must have nerves more or less exposed on the surface; but in the case of an irritable ulcer, it seems probable that the sheath of the nerve is destroyed, and that the end of the true nerve-fibre or tubule remains denuded and so causes the exquisitely sensitive and painful character of the ulcer. Upon this exposure of the nerve depends, I believe, the chief feature of what we term an irritable ulcer, and the method of detecting the precise seat of the exposed nerve is very simple. You must understand that my remarks on this subject are founded on an experience in such cases of twelve or fourteen years. Having a very painful uninflamed ulcer before you, you apply the blunt end of a common probe upon the sore, and as you move it about, presently the patient exclaims, "Oh! there you hurt me dreadfully." Then you go a little further on with the same method of examination, and scarcely any pain is felt; but on coming back to the same spot, the patient is

again "dreadfully hurt." At that painful spot some small nerve is exposed on the surface of the ulcer. The first time I observed this fact, and placed upon it what I believed to be the right interpretation of it, was in a case of a patient who had a thecal bursa extending from the palm of the hand under the annular ligaments to above the wrist. I made an aperture into the bursa above the wrist large enough to let out all the fluid and contents, and the bursal swelling gave me no special trouble, and it was speedily cured; but at the seat of the opening a very irritable painful ulcer remained which I could not cure by any local application. On examining the ulcer with a probe I discovered a point of exquisite tenderness. The normal position of the small palmar branch of the median nerve corresponded with the site of the local sensitiveness, and seemed to explain the pain. I then passed a small pointed bistoury under the track of the nerve above the tender spot, so as to divide the nerve between the spinal marrow and the irritable point of the ulcer; from that time the pain ceased, and the ulcer rapidly healed. It was cured by the "physiological rest" resulting from the division of that little nerve.—*London Lancet.*

Clinical Remarks on Encephaloid Cancer of the Testicle, with a Case; Delivered at the Pennsylvania Hospital, January 9th, 1861.

BY JOSEPH PANCOAST, M. D.,

Professor of Anatomy in the Jefferson Medical College.

This was a singular case of disease of the testicle, in which the positive diagnosis could not be determined until during the operation. Before operating, Dr. Pancoast said that his colleague (Dr. Norris) and himself had carefully examined the case, but none of their examinations resulted in a positive idea of the nature of the disease.

The man is a sailor, 34 years of age. He has never contracted any venereal disease; has had no scrofulous affection anywhere; is in the enjoyment of perfect health, having had but little sickness in the course of his life, and presents the appearance of the most perfect health. He has an enlarged globular scrotum, and this is the only evidence of disease about him. It cannot be a gonorrhœal affection, involving the parts within the scrotum—hernia humoralis—nor an orchitis, dependent upon some irritation made upon the prostate or upon the membranous portion of the urethra by the passage of bougies, which often gives occasion to chronic enlargements of the organ; the history of the case is all to the contrary.

Nor can it be a scrofulous or tuberculous testicle, the appearance of the man's general condition being sufficient to exclude any such cause. The patient is too young and too hearty to cause a suspicion of hydrocele, though it may possibly be such a tumor, with exceedingly thick walls. If the man had had a hernia humoralis or an orchitis, or suffered some recent injury, it might have been supposed that the gland had inflamed and swelled up, and, subsiding after a time, left a hydrocele.

The tumor is not particularly heavy, though it is heavier than a simple collection of water (the same size as the tumor) would be.

All these solid tumors were originally called sarcocele, no matter what the origin. If there was water present, the tumor was a hydrosarcocele, etc.; but the word sarcocele meaning merely a fleshy swelling, has been excluded from modern surgery as a vague term.

The term sarcocele was often used to denote a chronic enlargement of the testicle, sometimes dependent on a badly treated gonorrhœal affection, or chronic enlargement of the epididymis, occurring idiopathically. Scirrhous degeneration of the testicle, and various other forms of disease of that organ, were all denoted as sarcocele.

It is a question whether this tumor be not a hydrocele. If so, it has a most extraordinarily thick and dense serous coat. There is no distinct fluctuation as of water; but there can be distinguished an indistinct movement, approaching fluctuation, and, when pressed upon, it seems partly fluid, and presents the same resistance to the hand in all its parts,

Is it a scirrhous testicle?

When there is a scirrhous testicle, or cancer in its chronic stage, the tumor is always hard, heavy and irregular. This is not the case in the present instance.

Again: a scirrhous tumor is very painful, and especially so after handling. The patient never experienced any sensation of pain from this tumor, though it has given him a painful dragging sensation on account of its weight; but he has no shooting, darting, lancinating pains, and therefore it can scarcely be considered cancer.

We are therefore led, by exclusion, to the conclusion that it is either a case of hydrocele, an hydatid enlargement of the organ, or a case of encephaloid cancer of the testicle. It is in just the class of persons which this man represents that we find cases of encephaloid disease of the testicle. Prof. Pancoast has operated for encephaloid testicles on lads of fifteen and sixteen years of age, and also in men of fifty and sixty, though it is usually in men under the age of thirty years that encephaloid disease occurs.

There is one peculiarity about this form of disease—that it forms in the body of the testicle. It begins in the glandular structure of the organ, within the tunica albuginea; whereas in epididymitis, orchitis, scrofulous and tuberculous testicle, the disease is very apt to begin in the epididymis. But in encephaloid testicle it is the body of the gland that is most affected, and sometimes exclusively. When this is the case, the tumor retains the same globular shape of the testicle as in the present instance. The testicle of the patient is, perhaps, rather rounder than it should be, and somewhat broader in proportion to its length.

In encephaloid cancer of the testicle, there is seldom any pain in its commencement. Hence, from the want of pain in the tumor, its round and globular shape—from the freedom of implication of the cord—from the age and healthy aspect of the patient—the disease is quite as likely to turn out to be encephaloid disease as to prove an unusual case of hydrocele or hydatids.

Then the question arises as to what could have been the exciting cause of these encephaloid tumors. A single blow on the testicle is often a common cause of the development of encephaloid cancer.

The worst form Dr. Pancoast ever met, was produced in a young man by a blow from an apple thrown at him by a friend. In these instances the blow breaks some of the delicate blood-vessels contained in the cellular tissue of the organ; blood is poured out from them, and a disease is set up which takes the form of cerebriform cancer. The first stage of the disease is effusion of imperfect plasma in the body of the organ among the lobules, which forms into a little grayish mass, remaining dormant for a long time, and then gradually developing; cells are formed containing nuclei, which, forming into cells, burst their envelopes, and become in their turn mother-cells, which burst again as new cells are developed, and thus the growth becomes larger and larger; and as these cells press upon the lobules, they drive the seminal fluid out of the seminiferous tubes entirely and occupy its place. Then softening commences, and the disease invades even the hard, fibrous albugineous coat of the organ; the development of these cells increases, the fibrous coat is softened and made to yield in all directions, and all this without causing much pain. So it advances, and, while it remains even of considerable size, there is no change visible in the surface of the skin; but when it attains a certain size, the parts become excessively vascular—there is always increase of vessels, and hence the skin has a violaceous color, and is covered with large vessels, while the cord eventually becomes also enlarged. When the tumor has gone on to

this stage, it is too late to attempt a cure by an operation for its removal; for, by this time, the cancerous matter has passed into the absorbent vessels, whose course it follows into the glands—not the glands of the groin, for the absorbents from these parts pass up into the cavity of the pelvis, and the first glands they meet are the lumbar glands placed upon the sides of the iliac arteries; and if, in a case of encephaloid disease of the testicle, but one single gland in the lumbar region can be felt enlarged, it may be taken for granted that it would be almost in vain to perform an operation; for, if the glands have become involved, there is no help for the patient.

Sometimes these enlargements are developed so that they look somewhat like the pancreas, and for this reason the tumor they form was formerly called Pancreas of Asselli.

The tumor of the patient in question presents nothing but an enlarged globular appearance. The skin of the scrotum is perfectly natural in appearance.

It gives an indistinct fluctuation, like that which would result from cerebriform cancer when becoming soft.

To determine the nature of the affection, as to whether it was hydrocele or encephaloid disease, a small trochar was passed into the centre of the mass, and the point was found to move about very freely in the tumor, showing that the contents were very soft, while blood flowed freely along the edge of the instrument proving the structures to be vascular.

A cautious opening was made to see whether the tumor contained a collection of water in an unusual place, or whether the gland itself was enlarged and soft and malignant; the desire of the patient being that the latter should be found the case, it was to be removed while he was still under the influence of ether.

As it would be necessary to detach the cord in case the disease proved cancerous, and the testicle had to be removed, the ecraseur was chosen to divide the cord in mass, instead of strangulating it by a strong ligature, or cutting the

cord little by little, and ligating the arteries as they spring, which is the plan preferred by many surgeons.

The cremaster muscle, being attached to the cord, would jerk the divided end within the external abdominal ring, and if any blood should flow, contrary to the usual experience with the ecraseur, it would pass into the cavity of the abdomen and might produce serious mischief.

To provide against any possibility of this, or of secondary hemorrhage, it was always advisable to pass a ligature through the cord, above the point where the ecraseur is to be applied, so that, if necessary, the cord could be drawn down.

As a lancet-shaped needle might puncture some of the vessels, the ligature is best applied by means of a darning needle, which may be worked through so as to go between the vessels.

Hernia humoralis, chronic epididymitis, orchitis, etc., usually occur on the left side; and many writers have endeavored to discover some assignable cause for this peculiarity. It has been supposed to be owing to the general habit of carrying the scrotum to the left side of the pantaloons; and Ricord states, that in one case in which he met hernia humoralis on the right side, the patient was in the habit of carrying his scrotum on the right side of the seam in his pantaloons.

The tumor in the present case occupies the right side of the scrotum.

The operation was then performed by dissecting the different layers, one by one. A very small opening was made first, a fold of the skin of the scrotum being raised up and the knife passed flat through the base, then through the dartos muscle, down to the tunica vaginalis communis, which was grasped up in like manner, and opened on the groove director, and the knife passed through.

The tunica vaginalis was found adherent to the tumor, all over; the body of the testicle itself appeared to be the seat of cerebriform cancer in its early stage, without ex-

cessive softening, yet some fluctuation; a small opening made into it fully determined its malignant character.

The testicle was taken out with its serous tunic by drawing it from its bed, a plan much preferable to dissecting out the tumor, as it gives complete access to the cord, at the same time bringing away with it all the adjacent cancerous matter.

There was no apparent disease of the cord, which was then ligated by the needle being worked through, in the manner described, the thread being knotted so as to form a loose loop.

The ecraseur was then placed around the cord, close up to the thread and just below it, and gradually tightened—about seven minutes being consumed in the operation of cutting the cord; for if the parts be divided quickly, it defeats the main object of the employment of the instrument, which is, that the vessels may be divided, avoiding hemorrhage, by slowly crushing them under the chain of the instrument. The action of this instrument is such that the most vascular tumor may be removed without hemorrhage following, provided time be given for its removal. The cord was divided without loss of blood, and the piece cut off was so bruised as to be bloodless, hard, and firm, looking like a piece of india rubber, before it has taken the dark hue. The cord appeared perfectly healthy, and not even enlarged. The parts were dressed in the usual manner.

The timely operation in this case may protect the patient from a return of the disease; but, with our knowledge of the disposition of these tumors to prove fatal in the breast of the female, and even more so in the scrotum and testicle, there is reason for doubt in the prognosis.

If it should return, affecting the deep-seated lumbar glands, the disease will be entirely beyond relief.—*Medical and Surgical Reporter.*

Treatment of Fractures in the Royal Infirmary.

James Spence, Esq., Lecturer on Clinical Surgery, gives the following account of the treatment he adopts, in the Royal Infirmary, Edinburgh, in cases of fracture:—

"In cases of fracture of the shaft of the femur, I employ the long splint, together with two short splints, fixed with slip knots on each side of the broken bone, to prevent any lateral displacement. In fractures of the neck of the femur, the long splint, without the lateral support, is used; but in many cases of old infirm persons, in whom the use of the splint cannot be continued, I have recourse to the following plan: A long narrow pillow or pad is placed between the legs, extending from above the knee to below the ankle, and the injured limb is secured to the sound one, by bandages at the knees and ankles, a broad flannel spica bandage being applied round the pelvis, and over the upper part of the injured thigh, so as to fix the thigh and pelvis. I prefer this plan to the double incline of pillows, as it not only insures greater fixity and extension, but also enables us to place the patient occasionally on the sound side, and so diminish the risk of bed-sores forming on the back. In cases where, from extensive bruising of the body or limb on the injured side, or other causes preventing the use of the splint, and where, at the same time, full extension is desirable, I apply the long splint on the sound limb, and then keep the injured limb fully extended, by fastening it to the sound one thus fixed.

"In cases of simple fracture of the bones of the leg, I find the simplest and most satisfactory plan is the use of two lateral pasteboard splints with foot-pieces, moulded to the limb, secured by slip knots, the limb being laid on the outer side, and flexed to a greater or less degree, according to the nature of the fracture. In cases of very oblique comminuted or compound fractures, or in cases of fracture of

the tibia very high up, the use of Liston's splint, properly padded and adjusted, is the treatment I resort to. In fractures near the malleoli, attended with splitting of the lower part of the tibia, or separation of that bone from the fibula, in which the heel and foot are retracted, and the bones of the leg are projected, and where the tendency to retraction, recurring after coaptation, is considerable, the stirrup splint well paddled and placed on the front of the leg (used either alone or combined with narrow lateral splints), affords a fixed point to which we can bring forward the heel by bandaging, whilst, at the same time, it presses upon the bones of the leg, and prevents them projecting forwards. In cases of Pott's fracture of the fibula above the malleolus, attended with eversion and twisting of the foot, Dupuytren's splint, applied along the tibial side of the leg, is used as a fulcrum over which the foot is kept inverted, whilst at the same time, slight extension is preserved. For some cases attended with retraction of the foot as well as eversion, the stirrup splint may be used with advantage, the inner horn of the stirrup being made the fulcrum over which the foot is kept inverted, whilst retraction is obviated by bandaging the heel forwards to the splint. Of course, in the corresponding fracture of the malleolar part of the tibia, with inversion, the Dupuytren splint is applied on the fibular side, to keep the foot everted. With exceptional instances, I have always employed these simple methods, so long and successfully used in this hospital; and after very extensive experience in treating fractures in Hospital, Dispensary and private practice, I see no reason for changing to other methods which certainly could not afford me better results, and which seem to me attended with some risk, from which these ordinary plans are free. I allude, particularly, to the use of the starch bandage, and the plaster of Paris methods, of treatment, which are now much used on the continent. In regard to the starch bandage applied after the lapse of some weeks, when all risk of swelling, or other results of the local irri-

tation produced by the accident have passed away, and, as a means of abridging the period of the patient's confinement, I not only have no objections to it, but have recourse to it very generally. But, used from the very first, I think it objectionable, as preventing the surgeon from observing the state of the limb, and guarding against mischief. The advantage which some claim for it, that the patient may walk about with a crutch in a day or two after the injury, I look upon as no advantage, ; but on the contrary, I think the patient would be then much better in his bed, even supposing he felt the inclination to walk about. The plaster of Paris method, of course, has all the disadvantages of hiding the fractured limb from the surgeon's view, and, if I may judge from personal experience, when working with that material in taking casts, it must be anything but pleasant to the feelings of the patient, when it contracts in setting. I have seen a considerable number of cases of fracture of the leg put up in this manner in Germany, and I can easily understand that many such cases do well enough; but it is quite as likely that, in many cases, the mass of stucco in which the fractured limb is embedded, may be, very literally, a whited sepulchre. In a word, I think when we posses well-tried, simple, and successful plans of treatment, we should be very chary in departing from them. Novelty is not always progress, and unfortunately, many novelties in surgery at the present day seem to consist in departure from simplicity of treatment."—*Edinburgh Med. Journ.*, Nov.—*Amer. Jour. Med. Sciences, January*, 1861.

Obstetrics.

New Sign of Post-partum Detachment of the Placenta.

BY JOHN CLAY,

Senior Professor of Midwifery in Queen's College, Birmingham.

The rules usually given in obstetric manuals and text-books for the management of the placenta after the birth of the child are—to wait for a pain; or to carry the finger along the cord to the os uteri, and if its root can be felt, it may be fairly assumed that the placenta is thrown off, and may be easily extracted by gentle traction of the cord, with the aid of external manipulation. If these instructions be faithfully carried out, can we rely upon the facts elicited as infallible proof that the placenta is separated from the uterus? Pain may mislead, as it frequently arises from other causes than contraction of the uterus; and even if the insertion of the cord can be felt, it is not always conclusive on this point, as the root of the cord may sometimes be felt when the uterus is in a flaccid condition, by using moderate traction on the cord, and yet the placenta be not thrown off. Besides, the patient often lustily complains of the smarting pains caused by the frequent examinations deemed necessary to ascertain the fact; and often she positively forbids such a mode of interference.

Four years ago I was led to investigate the subject, with the view of improving, if possible, upon the old mode of managing the deliverance of the after-birth. I thus ascertained certain facts from which I came to the conclusion that a very simple sign existed by which the separation of the placenta, after the birth of the child, might be indicated; and having tested it in upwards of nine hundred cases, I hope I may be considered to be fairly entitled to

lay the results at which I have arrived before the profession.

Before dividing the umbilical cord, I always apply two ligatures, and make both sufficiently tight to prevent the occurrence of hemorrhage. If the maternal part of the cord is now examined, it will be found to be in a flaccid condition, and almost free from blood; but if it be again examined, at an interval, say from one to three minutes,it will be found to have acquired increased specific weight, and that the vessels are more or less filled with blood. The one fact may be ascertained by poising the cord on the fingers; the other by slightly grasping the cord near the vagina, with the thumb and fore-finger of the left hand, and with the fingers of the right hand suddenly compressing it, when a well-marked sense of fluctuation is perceived underneath the fingers of the left hand—a kind of resilience similar to the feeling produced when an elastic tube fillled with fluid is suddenly compressed.

When the placenta is thrown off, or sufficiently detached to give rise to a tolerably free hemorrhage, the cord loses its increased specific weight and the hydrostatic property just mentioned. These phenomena occur so invariably, that *the loss of the previously acquired hydrostatic properties of the cord after the birth of the child constitutes the sign of detachment* previously referred to.

The whole of the phenomena are manifested in three stages, viz: 1st, a state of flaccidity; 2d, a state of repletion; 3d, a state of flaccidity.

If the umbilical cord be slightly grasped by a spasmodic contraction of the os uteri, or by irregular contractions of the body of this organ, the *loss* of the particular hydrostatic properties may be delayed for a brief interval; but in a few seconds the spasm subsides, and those phenomena are produced which indicate the separation of the placenta, and that this structure may be safely extracted. The signs are not, of course, always equally marked in every case, often requiring experienced tactile management in order

to detect their presence. When the uterus is in a flaccid condition, the phenomena are manifested in a very slight degree, but are still perfectly reliable. On the other hand, when the uterus is contracted, with some degree of firmness, on the placenta, they are so well marked that the most inexperienced may readily detect them. In the cases of partially adherent placenta, the disappearance of the hydrostatic properties, after being once fully developed, and the failure to deliver the placenta by the usual manipulations, have always indicated to me the necessity of promptly adopting artificial detachment by the introduction of the hand. In twin cases, if the cord is firmly tied, I have invariably found that the signs persisted until the birth of the second child. In one case, where the hydrostatic properties disappeared, after being well marked, before the birth of the second child, I found, on examination, that the corresponding placenta was detached, and I at once removed it, which otherwise would probably have been suffered to remain. Neither mother nor child incurred any risk.

It sometimes occurs that the placenta is separated simultaneously with the birth of the child. In this instance the first series of phenomena may be absent, and it may be prudent to wait before proceeding to extract the placenta, although it may be generally effected with safety.

The practical value of these facts to obstetrics is obvious, as by merely compressing the cord in the manner previously indicated the precise time of separation may be easily ascertained, the placenta at once extracted, and the patient thus freed from those frequent annoying examinations usually employed. The prompt delivery of the placenta on the first efforts of the uterus, is very important, as this organ contracts then more efficiently, and the risk of hemorrhage is not so great, and it may be fairly assumed that the puerperal convalescence is not so protracted as under a more dilatory proceeding.

To students, or inexperienced practitioners, it might be a safe instruction to impart—not to interfere in the ex-

traction of the placenta so long as the hydrostatic properties herein defined are persistent.—*Dublin Quart. Journal of Med. Science*, Nov. 1860.—*Am. Journal Med. Sciences.*

Chronic Metritis.

Translated from the Gazette des Hôpitaux. By Medicus Ransom, M.D., Murfreesboro', Tenn.

Chronic Metritis (M. Becquerel.) *Treatment.*—We may class in seven orders the means used in the treatment of chronic inflammation of the uterus, but examining them in detail, I will point out some therapeutic rules, to which I attach very great importance.

1st rule. In parenchymatous metritis, though the mucous membrane may be perfectly healthy, we are often obliged to act upon it, especially when other means have failed.

2nd rule. In chronic inflammation of the cervix, we should not limit this action to the mucous membrane which lines the vaginal portion ; but it is indispensable to extend it to the mucous membrane lining the cervical canal, as it may or may not be altered.

3rd rule. Applied in similar cases, the same remedies may succeed or fail. We know not very well the cause of these different results ; therefore, when a remedy, after being used for a certain length of time, brings no good result, we should try another.

4th rule. Many different remedies may bring about a cure in chronic inflammation of the uterus. Under certain circumstances, five or six means succeed equally well in a given case. Thus, the same success may often attend the use of astringents, caustics, and cold water.

As regards the application of the means, we have established three other rules:

1st. We should, as much as possible, remove the cause of the inflammation, before commencing the treatment (forbidding coitus, violent exercise, etc.)

2nd. We should not forget that to render the treatment effectual, it is indispensably necessary to previously remove by injections morbid fluids which may be in contact with the diseased parts.

3rd. Every treatment of these chronic affections exacts a moderate but not absolute repose. We should advise our patients to take some exercise, but not to fatigue themselves, and to avoid sudden jars.

We come now to examine briefly each one of the seven modes of treatment which may be adopted:

1. *Antiphlogistic Treatment.*—Small revulsive bleedings, frequently repeated, have been often employed. Except in cases of sudden change from the chronic to the acute form of metritis, I proscribe them. I have seen patients who have had sixty or eighty of those bleedings in two or three years, and this mode of treatment had no other effect than to produce extreme anæmia. Now, as every sanguine emission gives relief for the time, both patients and doctors have been seduced by these deceitful ameliorations. I might say as much of leeches applied to the hypogastrium, and inner parts of the thighs. Here, as in acute metritis, there is no advantage in applying them to the cervix, and there may arise from it inconveniences and even dangers. This practice, recommended first by Dupracque, and afterwards extolled by Messrs. Bennett and Aran, ought, in my opinion, to be abandoned. When a state of exacerbation of the disease requires it, it is better to apply the leeches to the hypogastrium than elsewhere.

2. *Emollient Treatment.*—Many practitioners yet hold to this treatment. It consists in prescribing general baths, hip-baths, cataplasms, emollient injections of decoctions of marsh-mallow or bran. M. Cruveilhier has for a long time

made use of vaginal cataplasms. They are bags of fine cloth, filled with emollient substances, and are applied by placing them in a speculum introduced in the usual manner; the instrument is then withdrawn and the sac remains in the vagina. Those cataplasms, now generally abandoned, have the effect of calming the pain and affording a slight amelioration, but those advantages are but temporary. They, with other emollients, might be employed for whole years without effecting a real cure.

3. *Revulsive Treatment, properly called.*—It comprises issues, purgatives, and sudorifics. Some physicians have advised the application of blisters and cauteries to the thighs and lumbar region. They have gone further, and thought to apply blisters (tinct. cantharides) to the cervix even. Many physicians have even contended for the therapeutical discovery. I declare that it is a medication which I cannot approve. Often it acts in a disagreeable way upon the bladder, and besides, when the vesicatory has produced its effect, the disease is not generally modified. Since we have means more easy of application and of less doubtful efficacy, why not employ them in preference to those violent and unreliable proceedings? In England they have administered lavements in which have entered the very considerable proportion of 10 grammes of aloes to 120 of the vehicle. Some physicians had the credulity to believe, and to state, for some time, that this treatment availed more than all other. We know that this treatment induces diarrhœas, very troublesome, and very difficult to cure. I am convinced, moreover, that purgatives are but adjuvants. A very mild purgative weekly, suffices to favor the effect of the treatment, always somewhat complex, in chronic metritis.

M. Fleury has obtained good results from diaphoretics in most of the inflammations of the body of the uterus. In inflammations of the cervix, of some standing, the diaphoretics do not suffice.

4. *Astringent Treatment.*—I may say that it is most generally sufficient, together with injections of cold water, to

cure chronic inflamation of the cervix, especially when limited to the mucous membrane, or even when the tissue of the cervix is slightly involved. This treatment is employed in the form of injections of concentrated solutions, and of pencils similar to those of nitrate of silver. The astringents are:

1st. *Alum.* It determines the formation of pseudo-membranes, which are renewed without ceasing; this inconvenience has led me to abandon it.

2d. *Sulphate of Copper.* I shall reproach it with acting with too much energy.

3rd. *Acetate of Lead.* It is, on the contrary, too little astringent, and produces but an insufficient effect.

4th. *The Perchloride of Iron.* It is sometimes too feeble, and sometimes too energetic. The degree of astringency suitable for each particular case, is difficult to determine.

5th. *The Sulphate of Zinc, and Tannin.* These are the two best astringents which we can employ in the treatment of chronic metritis. These two medicines always succeed, but their use must be continued a long while. The same may also be said of cases where ulceration is present, and in which cauterizations are indispensable. I usually prescribe these astringents in the following proportions: Sulph. zinc, 10 grammes; Water, 100 grammes;—by injection. Or even the following concentrated solution: Tannin, 25 grammes; Water, distilled, 100 grammes. With this we saturate a tampon of wadding, and apply it to the cervix through a speculum, and leave it in contact four or five hours; at the end of this time the plug is withdrawn by means of a string previously attached to its middle. There are necessary from eight to ten of these applications at intervals of three days, to effect a cure in cases where the mucous membrane only of the cervix is affected. If the inflamation has extended to the uterine tissue, I prefer to employ astringent pencils. I invented this mode of application while physician to the Sourcine Hospital. The pencils to which I give preference, are composed of about three parts of tannin to one of gum

tragacanth, mixed with castor oil in such manner as to be of sufficient consistency to preserve its form. We make them about three or four centimetres (about $1\frac{1}{4}$ inches) in length. On an average, eight applications, made at intervals of five days, have effected a cure.* The astringent treatment offers no inconvenience, and produces no pain.

I believe that when there is but a simple chronic inflammation of the mucous membrane, with or without granulation, but without ulceration, and even when the substance of the cervix is itself involved, the application of tampons saturated with a concentrated solution of tannin, or the introduction of the astringent crayons, are the only means to be employed.

5. *Caustic Treatment.* Caustics fill three indications, to-wit: 1. They destroy the diseased parts. 2. They impress upon the local circulation of the suffering part an increased activity. 3. They act as revulsives, by the eschar which forms, and the suppuration which succeeds.

The caustics employed are very numerous. I shall point out to you the most important in indicating the cases to which they are best suited.

The solid nitrate of silver is employed, above all, in chronic inflammations of the mucous membrane of the cervix with granulation, and excoriation. There are generally necessary from seven to ten cauterizations, at intervals of five or six days. A stick about $\frac{3}{4}$ of an inch in length should be introduced, half within and half without, the cervix. After this cauterization, we should never fail to make abundant injections, to remove the residue of caustic.

These cauterizations are excellent when the parenchyma is healthy. The nitrate of silver in concentrated solution,

*M. Becquerel makes these pencils cylindrical in shape, and about one-sixth of an inch in diameter; they are introduced into the cervical canal with the uterine forceps, and the tampon of cotton soaked in the solution of tannic acid, is applied. This is removed in about twelve hours, when the tannic acid cylinder is found dissolved. M. Becquerel uses as his "tampon" a ball of cotton.—Translator.

offers no advantages. This liquid runs over all the parts, spreads over parts which we wish to respect, produces unnecessary pain, and sometimes sloughs too profound.

The acid nitrate of mercury is a dangerous compound. It is to be hoped it will fall into obloquy.

The caustic potash, and the Vienna paste, have been extolled by M. Gendrin. M. Bennett, his student, has shown himself a partisan of this proceeding. They are to-day almost alone in the employment of these agents. Scanzoni and others have found that the application of these caustics throws the patient into a state of excessive prostration.

The cauterization with the hot iron, which has been so much abused, is an admirable means when properly applied.

It is principally in the fungous state of the cervix, that the actual cautery should be preferred to every other caustic; to the solid nitrate of silver, for example, which in such cases is of no utility. That the actual cautery may produce its full effect, it is necessary to cauterize superficially, and with the two irons in the following manner: The one, the smaller, No. 1, is introduced at a white heat, into the cervical cavity, and immediately withdrawn. The other, the larger, No. 2, heated to the same degree, is applied lightly, to all the surface of the cervix which is prominent in the bottom of the speculum. After having withdrawn the last iron, the speculum being yet in situ, I make an injection of many litres of cold water. In general there are necessary from two to five cauterizations, made at intervals of fifteen days, to effect a cure.

This operation, which is so frightful to females, is the most innocent of all the modes of treatment. It produces no pain, and is never followed by accidents when the cauterization is superficial. The granulations which have resisted the action of the solid caustic, yield very soon after a single application of the hot iron.

When the cervix is indurated and voluminous, it is useless to address any other means to it, than the actual cautery, and injections of cold water night and morning.

It is above all in these cases, that the galvano-caustic is made to render important service in deceiving the timidity of patients.

6. *Hydropathic and Sudopathic Treatment.*—I am in the habit of always having administered cold injections as adjuvant to other means. These injections, which in many instances are sufficient of themselves to overcome chronic inflammations, are often an indispensable compliment to other methods of treatment. These douches should be used two or three times a day, and very moderately. I use for this purpose, either the irrigator of Equisier, or the portable apparatus for the douche by M. Charrière. This small apparatus, which costs but 35 francs ($7), is generally chosen by patients who regard expense. The hydro-sudopathic treatment is adapted to cases of chronic inflammation of the body of the uterus. It consists in sweating the patients in an atmosphere heated by a spirit lamp, and when the sweat is well out, plunging them in cold water, or administering the shower bath.

This treatment, violent in appearance, has never any inconveniences, and produces excellent effects.

Puerperal Insanity.

Reported by Wm. B. Atkinson, Recording Secretrry.

PHILADELPHIA COUNTY MEDICAL SOCIETY,
Wednesday Evening, Jan. 9th.

Dr. REMINGTON, President, in the Chair.

Dr. JOSHUA H. WORTHINGTON introduced the subject by an allusion to the importance of the malady under discussion, and the remarkable dearth of authorities from which to obtain information. The principal authorities are Esquirol; Dr. Macdonald, of New York, Dr. Gundry, of Dayton, Ohio; and Dr. Marcé in France.

The term "Puerperal" is not essentially significant as to the character of the symptoms of the type of the disease. Nor does it imply a dependence of the cerebral symptoms upon any sympathy with the child-bearing state, or it would cease upon the termination of gestation.

He then alluded to the laws and customs of ancient Rome in relation to the moment of parturition. The proportion of insane to parturients is extremely small.

The puerperal state is divided into three periods; utero-gestation; the period extending from delivery to the end of the second month, at which time the uterus has returned to its normal condition, and in women, who do not nurse, the menstruation is established; and third, comprising the period of lactation, extending from the end of the second period to the point of time after weaning, when the first menstruation is accomplished. He would consider the disease as it occurs during each month.

1. Without enumerating the numerous caprices, etc., of pregnant women, and which are so well known to obstetricians, he would merely mention some as showing the intimate sympathy between the pregnant uterus and brain.

Dr. Marcé relates the case of a woman who became hydrophobic during the first four months of each of eleven pregnancies. The dread of water began to be manifest soon after conception, and became so excessive; that she could neither drink herself, nor bear any one else to do so in her hearing, and to cross a stream of running water was equally as bad. Caseaux mentions a young lady, who, during her first pregnancy, felt an uncontrollable dislike for her husband, to whom she was tenderly attached, etc.

The liability to pregnancy is much less than during the period immediately following delivery. Of 783 cases ot puerperal insanity, only 65 occurred during utero-gestation. The form is generally melancholic, and the causes, besides hereditary influence, are a depressed condition of the physical forces, and painful emotions. Some attacks terminate with a delivery, and various authors mention such cases. A remarkable feature is the almost entire absence of suffering during labor, and, also, we find a great exemption from the usual accidents of parturition. When the disorder can be clearly traced to the state of the uterus, recovery may be expected when delivery takes place. But when it is the result of some shock to the nervous system, etc., the prognosis is more favorable.

Temporary insanity at the moment of delivery, in consequence of the accompanying physical suffering, rarely occurs; all obstetrical authors describe the agitation and anxiety of the moment when the head of the child is passing through the uterine neck, and it is not wonderful that an acute attack of mania should occasionally supervene. Notwithstanding the severity of such attacks, they are seldom followed by evil consequences, except such as result from the violence of the female against herself or her offspring.

The following case by Esquirol, is suggestive of the considerations, in a medico-legal view, which may arise. The girl had made no secret of her pregnancy, and was all ready for her confinement. She was delivered during the night, and the next day the body of the child was found in the

cess-pool, mutilated with a blow from a pair of shears. She confessed the act without the least regret, and appeared entirely unconscious of having done anything wrong.

2. The period following delivery and extending to the third month, about which time, in those who do not nurse, the menstrual function is resumed, furnishes the greatest number of cases of insanity. Of 783 cases, 453 occurred during this period. The causes are such as belong either to the constitution or such as act upon the system from without, and may be called accidental.

After alluding to views formerly held upon this subject, he says the present state of knowledge leads us to believe that neither the suppression of the lochial discharge, nor of the lacteal secretion has, necessarily, anything to do with the mental disorder, since, in many cases, the disorder does not appear until after the normal cessation of such discharges, that is about the sixth or seventh week, and in cases where the disease has appeared, no interruption of the lochial discharge has occurred.

As far as the direct results of labor are concerned, Marcé attributes puerperal insanity to the constitutional disturbance attendant upon the establishment of the lacteal secretion, and to the general shock of the nervous system, which is the direct consequence of labor. The condition of the uterus may be next considered. Valpeau says that part of the liquid contained in the substance of this organ must now return, more or less altered, into the circulation. Portions of membranes, etc., may be left in its cavity, and give rise to morbific action, and, finally, the equilibrium, which is about to be established, tends to impart a fresh shock to the nervous system. The causes connected with the physical condition of these women cannot be regarded as sufficient to give rise to insanity, since they are present in all, though not attacked with the affection. Hence, we must take into view the causes of general insanity, as a constitutional tendency, either hereditary or acquired. In 56 cases 22 were either descended from insane ancestors, or

had collateral relatives who had been insane. This corresponds with the proportion of Esquirol, while Dr. Burrows found in eighty, more than half hereditarily predisposed.

All influences which tend to lower the standard of health and produce anæmia, may act as causes of the disease. Women who have had several children, and are exhausted by lactations, and labor under the strokes of poverty, are most liable. Among 57 patients, only 14 were primiparæ, and of the remainder, 13 had passed through five, six, or even more confinements or abortions. Women are also more liable as they advance in years, and once attacked, they will be extremely liable in future confinements, requiring great precautionary measures.

Esquirol considers moral emotions as an important cause, but is opposed in this view by Burrows and Marcé. The latter, however, attributes to fear, violent sorrow, etc., nine cases in a total of 66. Such causes are known to produce a large proportion of cases in the non-puerperal state, and their influence could not be expected to be less upon a puerperal female, than one in ordinary health. Cold, or neglect of any kind, may aid in its production.

Marcé regards the return of the menstrual flow as exercising an unquestionable influence in the causation of this malady, and relates cases to prove his assertion. Of 44 persons attacked during the second period, eleven became insane about the sixth week. The lesson to be drawn from this should teach the physician to regard this as a critical period, and therefore, to use every precaution till it is safely passed.

Mammary abscess, difficult and protracted labors, uterine hemorrhages, puerperal convulsions, and the inhalation of chloroform, have been accused as causes, though many differences exist between authors on these points.

The symptoms of puerperal insanity at this period present no peculiarities. Generally, the lochial discharge and the lacteal secretion take place as usual, and the intellect-

ual disorder is not different from that observed in ordinary insanity.

The only affection with which it is likely to be confounded is acute meningitis. Generally, however, the absence of fever, or other symptoms which indicate a grave physical lesion, will show that inflammation is not present.

The terminations of this form of insanity may be in recovery, incurability, or death. The other may be anticipated in cases where the affection is due to long-continued grief, care, or anxiety. Death generally occurs in chronic cases, by some affection of the lungs or bowels; in acute cases death most frequently ensues from what the French call acute delirium.

When mania is about to terminate in this form, the agitation and excitement daily increase, the tongue becomes dry, the digestive functions are impaired, the pulse increases in frequency, and soon exceeds 120 pulsations per minute; the face is flushed, the eye has a wild expression, and the skin is covered with a clammy sweat. The patient becomes the prey of constant hallucinations, wastes her strength in violent muscular efforts, and is scarcely conscious of surrounding objects. She passes whole nights almost without any sleep, and obstinately refuses all nourishment, but especially liquids. A striking peculiarity is the great terror constantly evinced by the patient.

If, in a few days, no improvement occurs, other unfavorable symptoms ensue, collapse comes on, and death speedily closes the scene.

These symptoms, however, may be prolonged for a considerable time, emaciation may go on rapidly, the urine and stools being discharged involuntarily, and death occurs in one of many fits of syncope.

The anatomical lesions are disproportioned to the gravity of the symptoms. There is neither thickening of the membranes, nor alteration of the cortical substance, nor secretion of plastic lymph, nor any of the changes which ordinarily denote inflammation. There is generally, however,

vascular congestion of the minute blood-vessels of the pia mater, and Dr. Calmeil considers the affection to be a true inflammation of the cortical cerebral substance, and has given it the name of *peri-encephalitis.*

3. The condition of females during lactation has been aptly called a prolonged puerperal state. The patient, according to Calmeil, is more nervous and impressible and accessible to morbific influences. Such patients may be attacked during the first six or seven weeks after labor, but such cases may be more properly regarded as belonging to the second period. Those which belong especially to this term, set in after eight or ten or more months of lactation, when the system has been exhausted by the long continued drain. In a small number the malady commences after weaning. As a consequence of the exhaustion produced by lactation, some women are met with in a state of intellectual enfeeblement, the memory is slightly impaired, the ideas are confused, and the patient acts strangely. All the symptoms of anæmia are present, emaciation takes place, and the whole system is more or less disturbed. The milk may be diminished in quantity, or if it remains, the emaciation is more rapid, and shortly hectic fever intervenes. From this state she may pass imperceptibly into that of decided insanity, or it may suddenly be established by some emotion, or error of regimen, etc. Mania and melancholy are the most frequent forms as a result of these causes. Generally the milk continues to be secreted, though it may be suspended in the midst of the excitement. Of forty cases, but six had suppression of this secretion, and another observed, Dr. Marcé, has never seen this occur.

A considerable number become insane immediately after weaning Some are of a plethoric habit, and have borne lactation perfectly well, In such the sudden suppression of an evacuation, which has continued for many months, induces a state of plethora, which may end in disease. In others, though weakened by it, the system has become accustomed to the drain, and adapted itself to it. In these,

precautions are necessary when weaning, to prevent the supervention of the disease.

The effort to maintain the menstrual discharge will have the same tendency, and the return of this function may be accompanied by such disturbance as to result in insanity.

The prevention of this affection, when threatened, will consist in instituting proper hygienic measures; avoiding every source of exhaustion; giving nutritious diet, especially when hemorrhage to any extent has accompanied parturition; and guarding her against excitement of any kind. When lactation is the cause, the child should be weaned, at the same time care being taken to prevent any other disturbances from arising by the accumulation of the milk. The same may be said of menstruation; great care is necesary to prevent exposure to cold until this function is re-established.

As in ordinary insanity, so we know so little of the lesions of this form that we are compelled to rely in forming our judgment of its nature upon our information as to the causes and circumstances under which it originates. Autopsies generally fail to show any sign of inflammation, though Calmeil, from his researches, has concluded that the acute form of delirium is an inflammatory disorder of the cortical cerebral substance, and yet he regards it as one not allowing the use of antiphlogistics. McDonald adopts a similar view.

For the treatment, various measures have been proposed, as blood-letting, tartar emetic as a contra-stimulant, warm baths, purgatives, narcotics, etc. All depletory remedies have proved injurious in the vast majority of instances. They have even been thought to confirm the disease in several cases.

In the commencement of an attack, it will generally be necessary to place the patient in a room partially shaded, kept as quiet as possible, and into which no one should enter except the necessary attendants. A warm bath continued for two or three hours in the evening will tend to allay

nervous irritation and promote sleep. The bowels should be regulated by laxatives—continued according to circumstances, till the digestive functions seem to be in proper order. Some gentle narcotic, as a combination of asafœtida, hyoscyamus, and camphor may be given every three or four hours. The diet should be nutritious, but not stimulant, and may advantageously consist, in a great part, of new milk, given as freely as the patient can be induced to take it, or as the stomach will bear it.

If an increase of maniacal excitement should occur, the same treatment may be continued; but here, in consequence of the difficulty of controlling the patient, and getting her to take food and medicine, confinement, as by means of the bed-strap, will become necessary; thus her strength will be husbanded, and the management be rendered easy and effectual. In many cases of acute delirium, the patient refuses food with obstinacy, and the œsophagus tube should be passed through the nostril, and milk, beef-tea, or other liquid nourishment may be passed at regular intervals.

If there be increased heat of the scalp, it may be removed by warmth to the extremities or a dose of laxative medicine, or cold to the head. Mustard pediluvia in the evening are always of service, and blisters to the extremities have been found useful as derivatives. It sometimes happens that, with considerable mental anxiety. evidences of cerebral oppression will become apparent, the patient is conscious of everything about her, but appears to labor under difficulty in collecting her thoughts, and in recalling the occurrences of the day; and, in attempting to do so, her mind becomes confused and the effort fails of its object. When such symptoms occur, in the absence of fever, a large blister, covering the entire scalp, has been found productive of decided good effects and relief to all the symptoms.

In presenting these remarks, he would conclude by saying that the opinions are such as he has formed after a

careful comparison of the observations of those who have written on the subject, with his own experience.

Dr. Darrarch expressed his admiration of the term "puerperal insanity," because it is significant of the etiology and pathology of the disease under discussion, and also suggestive of its therapeutics.

The other terms, in the nosology of insanity, are less scientific. Mania and melancholia relate chiefly to the two opposite stages of excitement and depression; dementia, in its unrestricted use, means the sequelæ of insanity, the condition of senile atrophy, or the concomitant of congenital cerebral defect or of arrested cerebral development; monomania designates only specialities; and the recent and unconventional phrase "moral insanity," is only the materialist's notion of human depravity, which makes the world, in all ages, an insane hospital. These terms, he was satisfied, from observations in the insane asylums of this country and of Europe, and from his service in medical institutions, were hygienic, and more suited for the arrangement of patients than for pathology and therapeutics.

Not so the phrase "puerperal insanity." Here is signified not only the cause and effects, but their different localities —the latter in the brain, and the former in the uterus, is suggestive of two indications in the treatment: the one, cerebral palliatives, to control the symptoms; the other, radical agencies, to restore the uterus to its normal conditions.

Before the pathology of morbus coxarius, vesical calculus, and membraneous hepatitis were discovered, appliances were exclusively and mainly made upon the seat of the symptoms—the knee, glans penis, and shoulder.

Then may it not be that, in the treatment of puerperal insanity, there is unwisely the exclusive direction of medical appliances to the brain, and, owing to disregard of the casual word "puerperal," the omission of tonics to the reproductive organism.

To confirm this, he called to mind the three purposes of the animal organization, viz: by a nutritive organism to

sustain life, by a senso-motor organism to hold the relations of life, and by a reproductive organism to perpetuate the species.

This last, the reproductive organism, is the compound of the others—the nutritive and senso-motor; thereby it not only accumulates arterial and venous blood, animal heat, and concentrates the force of both cerebro-spinal and gangliar systems, but also obtains a power of wonderful increment and of surprisingly sudden decrement. The genital system, the cœliac plexus, and the medulla oblongata are the nodes of vital force, and of them the first noticed is the most powerful. Its budding, at the onset of the third climacteric of life, affects our entire humanity, not only for our present but future state of existence. Our emotions, passions, faculties, and functions are thereby perfected, and, after seven years' training, are fit for full operation.

If, then, this compound organism exercised, in its normal state, an empireship for good, what, when diseased, must be the extent of its influence for evil? Of this, a mere page is afforded by the primary, secondary, and tertiary stages of syphilis, with its horrid and multiform sequelæ and catenations; another page is afforded by consanguineous marriage; a third is that from erotism. To this, as throwing light on the therapeutics of puerperal insanity, he would direct attention.

The form of erotism most allied is that of erotic mania. A case in illustration, which he cited, was that of a colored prisoner of the Eastern State Penitentiary, in the year 1837. The watchman reported him walking his cell all night, out of his mind. When visited medically, he was found standing in a fixed position, regardless of things and persons, and gazing up at the arch of the cell, and his eyeballs in quick and constant motion; his muscles were tremulous, the pulse was relaxed and refluent, and his food and bed at night neglected. The cold, damp hands, which Dr. D. discovered subsequently to be pathognomonic, was a symptom which, in this first case, was unnoticed.

The case, though peculiar, was, nevertheless, diagnosed

to be somehow mania a potu. A second and third case, and subsequently several additional cases, occurred; and there had been, previous to his service in the institution, similar cases which, indeed, had been prejudicially reported as cases of direct mental insanity, induced by the separate system of imprisonment.

Neither this nor intoxication was the cause, for, with few exceptions, the cases were among the debased negro prisoners without intellect, and who had been without rum for several months. The cause was masturbation; every other sensuality being debarred they indulged in this the more. The damp cold hands which Dr. D. had noticed in cases of erotism and leucorrhœa he, in time, discovered to be a constant sympton in not only these prison cases of insanity, but also in erotic cases of his private practice. In these the coldness and dampness was always associated with a purplish red color and torpid capillary circulation of the back of the hands. This may be regarded as a pathognomonic symptom, and need not be confounded with the blue cold hand of heart disease nor that of chronic dyspepsia. It is associated with depressed emotions, indecision, mental debility, and hallucinations, and, in some cases, terminating in tabes. This sad condition comes on with the impotency which results from the inordinate emissions, and may properly be regarded as the second or cerebral stage of erotism, in which all the phenomena of the disease are in the cerebro-senso motory organism, whilst, nevertheless, the actual lesion is in the reproductive-organism, and in the male may most likely be found to be a congestion of the vesiculæ seminales, resulting from indirect debility, and tending to atrophy and sterility.

From among the many such instances on his office case book he cited that of a talented youth recently admitted with much promise, to the bar. "Oh, doctor!" he exclaimed, in a feeble and tremulous tone, "I'm unfit for business! I'm going crazy! Everything agitates me, and the future is dark and foreboding!" Here, associated with muscular tremors, relaxed, refluent pulse, anorexia, wakefulness, rest-

less eyeballs, Dr. D. noticed the characteristic *cold, damp, purplish-red hands, with the torpid capillary circulation.*

This marked symptom diagnoses the verge of erotic mania which was confirmed by a confession of an extreme practice of masturbation, which was now followed by a total absence of erections and emissions.

The cerebral symptoms Dr. D. disregarded, as shadowy consequences of the substantial disease of the genital system.

The sole indication, therefore, was restoration of the reproductive organism from its state of indirect debility. The suggested means were chalybeates, bromide of potassium, and a diet of oysters and such like phosphoric food.

The benefit of this treatment was soon manifest, and in a few weeks he was restored to health and business. In regard to the bromide of potassium, Dr. D. remarked that his attention had been called to this agent by Dr. James Durrach, who had successfully used it in a similar case, and who refers the primary use of the article in genital complaints to Trousseau.

Regarding bromide of potassium as a specific tonic to both the male and female organs of generation, Dr. D. has, for sometime, and in many cases, administered it successfully in too partial and too abundant menstruation, in leucorrhea, and in various degrees of the indirect debility above noticed of the male organs of reproduction.

As regards the use of phosphoric diet, its efficiency is not only supported by many cases in his own practice, but by the successful practice of the dry phosphoric acid in the practice of his friend, Dr. Fricke, and by the testimony of Dr. ——, that a husband and wife who were without issue for several years, eat daily of the head of the boiled rock fish, in accordance with medical advice, and conception, full gestation, and a safe birth followed, and in due time occurred a second birth. How far the bromide of potassium may be an important adjuvant, is left for future practice to determine. The formula which he has always used is :

℞ Bromide Potass. ℈ ij.
Aq. Cinnam., f ℥ ij.
M. ℥ i. q. t. h.

Taken on the empty stomach, an hour before ordinary meal time, and at bed time.

In view of the above remarks he would, in conclusion, say that in puerperal insanity the uterine treatment, respectfully suggested, is intended as an addition to, and not a substitute for the cerebral treatment. At the same time, in respect to this, it may be well to question the benefit of the antiphlogistic treatment, and, if indeed, revulsives of a proper kind to the feet and the use of valerian would not be more efficient. In one case, in his practice, with the advice, in consultation of Dr. Meigs, it was, after various vain efforts, the finally successful treatment. The strong infusion of valerian was administered in the fluid citrate of potassa, every two hours. After two days' use the patient, who for days had contracted an aversion to her best friends, imagined each coming inspiration to be her last, and imperatively taxed her nurse day and night to constantly fan her, was restored to sleep and appetite and normal emotions and mind.

Another concluding remark. If, said he, the genital system be a cause of insanity, so is the liver and stomach. In regard to the liver, the term melancholia shows that the ancients were well aware of an abdominal origin of disordered mind. And in respect to the stomach the cases are numerous. Among those in his practice was that of an intelligent lady, whose life consists of alternate periods of extreme dyspepsia and destructive insanity. Whilst under the cerebral form of her disease, the stomach is healthy; she feeds with appetite, sleeps, and accumulates flesh; but when the mind is right, she becomes a miserable dyspeptic and emaciates.

Here, then, he remarks, are presented puerperal, erotic, gastric, and hepatic causes of insanity, which may be considered as species under the genus, reflexinsanity.

(To be continued.)

Therapeutics.

Chlorate of Potash.—Dr. E. J. Fountain of Davenport, Iowa, thus sums up the virtues of Chlorate of Potash: "Believing it to be a *tonic*, *alterative* and *blood depurant*, superior, in many respects, to anything in our materia medica, I do not hesitate again to urge its claims upon the attention of the profession. From the time when, in 1851, I discovered its utility as a remedy for mercurial ptyalism, I have been testing its properties in many directions, and with constantly increasing confidence in its virtues, and (in the language of Dr. Hutchinson) "its scarcely less than wonderful power." I believe there is no tonic and alterative comparable to it in all manner of scrofulous diseases, and every form of tuberculosis, in the sequelæ of the exanthemata, in adynamic fevers, and asthenic types of disease with depressed vital powers, in every condition involving an imperfect æration of the blood, and many derangements of the system resulting in abscesses, eruptions, ulcers, &c. In my opinion it has this wide range in its application by reason of its *oxydizing* properties." He gives it in the form of a saturated solution, wineglassful at a dose, from one to four times daily, after meals.—*Am. Med. Monthly and N. Y. Review.*

Quinine as a Parturifacient.—In the *Lancet and Observer*, for December, is a paper by Dr. John Lewis, in which quinine, in ten grain doses, is recommended as a parturifacient He says, "The facts above detailed have occurred so often in my practice during the past ten years, that when I find a patient in labor with a rigid os uteri, a tense pulse and dry skin, I always give quinine *freely*, use dry cups over the sacrum, and the warm foot-baths, and expect the os uteri to relax, the pulse and skin to soften, the uterine contractions to increase in frequency and force, as surely and certainly as I would nausea to follow the exhi-

bition of ipecacuanha, or purging from jalap. I look upon the result as a *pro hoc*—look for it with as much confidence as I would convalescence from anæmia or erysipelas, *after* ths exhibition of the chalybeates." He says further, "in my experience, it (quinine) proves itself to be a better parturifacient than any of the agents belonging to that class." —*Ibid.*

Belladonna in Enuresis.—Dr. D. D. Slade in *Boston Med. and Surg. Journal*, says, "In our own practice, we have met with signal success in the treatment of enuresis in children, by the use of belladonna; and lately we have the results of a series of carefully conducted observations upon this affection, by Dr. Hewson, of New York, which are at once conclusive and satisfactory. Dr. Hewson's observations embraced *sixty-three* cases, and he regarded belladonna as almost specific."—*Ibid.*

Ice-Water in the treatment of Croup.—Dr. J. A. McFarland of Tiffin, Ohio, in speaking of this treatment in at least two hundred cases, says, "For my own part I can truly say, if I were confined to a single article in the treatment of tracheitis, I would prefer cold water to all others. By its judicious employment, commencing before the formation of false membrane, there will be little or no danger of a fatal termination. Even when diphtheritic formations have commenced, there is no surer way of arresting their progress.

It is neither necessary nor proper, however, to confine ourselves exclusively to a single remedy. Whilst, in severe cases, our reliance is mainly on ice water, recourse is had, as occasion requires, to ipecac, and alum, as emetics; enemata, castor oil, or calomel to evacute the bowels; the warm bath, anodynes, and solution of nitrat argenti.

* * * * * *

In applying the remedy under consideration, we use folds of muslin or linen, large enough to cover the whole throat and upper part of the sternum. The wet cloth, wrung just enough to prevent dripping, ought to be well

covered with several thicknesses of dry flannel, and then both should be secured with a small handkerchief.

When we wish to have the applications very cold, it is best to have two wet cloths, using them alternately, as fast as they become warm. This course should be continued till the disease is thoroughly subdued. When treatment is commenced early, a few hours may suffice; in neglected cases, several days are sometimes required.

In some cases, water fresh from the well or cistern will be sufficiently cold; but as a general rule, the preference should be given to ice-water.

On the Therapeutical Method of preventing Pitting of the Face in Confluent Smallpox.—During the last five years Dr. Stokes has employed gutta percha and collodion in a considerable number of cases of confluent smallpox, for the purpose of preventing pitting of the face. In most of the cases the crust came off in large flakes or patches, composed of the dried exudations and the covering material, leaving the skin uninjured. This kind of treatment was most adapted to those presenting a more sthenic type. Dr. Stokes considers that the application of poultices over the face is the surest method of preventing disfigurement in smallpox. Their use should be commenced at the earliest period, and continued to an advanced stage of the disease. In most cases they may be applied even over the nose, so as to cover the nostrils. The plan should fulfil three important indications of treatment—namely, to exclude air, to moderate the local irritation, and to keep the parts in a permanently moist state, so as to prevent the drying and hardening of the scabs. The best poultice is formed of linseed meal, which should be spread on a soft material, such as French wadding, and covered with gutta percha paper or oiled silk. The conclusions to which Dr. Stokes arrives are the following: 1. That the chances of marking are much greater in the sthenic or inflammatory than in the asthenic or typhoid confluent smallpox. 2. That, considering the change in the character of disease observed during late years, we may explain the

greater frequency of marking in former times. 3. That in the typhoid forms of the disease the treatment of the surface by an artificial covering, such as gutta percha or glycerin, will often prove satisfactory. 4. That in the more active or non-typhoid forms the use of constant poulticing, and of every other method which will lesson local inflammation, seems to be the best mode of preventing disfigurement of the face.—*Dub. Quar. Journ. Med. Sci.*

Chloroform.—In the *Med. and Surgical Reporter*, for December 22, Prof. Gross' clinical remarks upon chloroform are quoted. He "has used chloroform for more than ten years, without ever having seen any accident resulting from it. He prefers it to ether, as the anæsthetic influence is more rapidly produced, and more easily maintained by it; as it causes less bronchial irritation, and is less liable to produce vomiting, or other unpleasant effects. In order to use chloroform with impunity, it is indispensable to observe the following rules: 1. The patients stomach should be empty. 2. The patient should be kept in the recumbent position. 3. There should be no constriction of the chest and abdomen from clothes. 4. An abundance of fresh air should be allowed to admix with the chloroform. 6. The inhalation should be effected gradually. And 6. Care should be taken that the article used be perfectly pure."—*Ibid.*

Burns.—Mr. Henry, a British surgeon, recommends the permanganate of Potash as a superior dressing for suppurating sores, particularly suppurating burns. Dr. Rittenhouse of Pennsylvania, says the best application to suppurating burns he has ever tried, is one part of powdered rhubarb, mixed with two parts lard, and applied on linen cloths. Prof. Richardson, of New Orleans, recommends sub-nitrate of bismuth and glycerin to be rubbed together in a mortar to the consistence of paste, or thick paint, and apply with camel's hair brush or mop of soft rag: cover with carded cotton, and, if necessary, retain with loose bondage. Dr. Butler, used simple *putty*, pressed out into a thin sheet, as a

dressing to burns, with benefit.—*Cincinnati Lancet and Observer.*

Fat as an antidote to Poisoning by Arsenic.—A small quantity of fat, as of milk, meat &c., will reduce the solubility of arsenious acid to about one-twentieth of what ordinarily belongs to it, according to Dr. Blondlot. Hence, fat swallowed immediately after arsenic will hold it nearly or quite harmless until radical means can be adopted to evacuate the stomach. If this is true, it has immense practical value.—*Ibid.*

Oxalate of Cerium.—Dr. Lee, of Blockley Hospital, Philadelphia, confirms Prof. Sampson's statements of the value of oxalate of cerium in obstinate vomiting of advanced pregnacy; and has likewise obtained great good from it in the emesis of tuberculosis, and in pyrosis and hysterical vomiting. He credits it with valuable tonic properties, and has given it with marked benefit in atonic dyspepsia. He gave it in doses of one or two grains in pill every two or three hours.—*Ibid.*

Oxyde of Bismuth in Gleet, &c.—Repeated trials have convinced Dr. Gaby, of Paris, that injections of oxyde of bismuth constitute the very best treatment of gleety discharges. Thirty parts are suspended in two hundred of rose water and so injected as to leave as large a deposit as possible of the salt in the canal. Three injections per day should be employed at first, and then fewer. Urethral discharges, unconnected with gonorrhœa, as observed in a certain diatheses, in masturbation, veneral excesses etc., have been successfully treated in this manner. Balanitis, balanoposthitis, and herpes preputialis yield rapidly to bismuth applied in powder, after cleansing the part and then covering with cotton. The various forms of vulvar leucorrhœa may be treated with the same agent: after removing the complications, the bismuth acts upon the discharge like a specific. But it is to be remembered that this remedy is only adapted to chronic cases; pain and other signs of acute inflammation contra-indicate its employment.—*North Amer. Med. Reporter.*

Reviews and Editorial.

We have received, from the author we presume, an introductory address to the Medical Class at St. Louis, entitled "Medicine for the Million," by M. L. Linton, M. D. The lecturer shows that he possesses a bright and thoughtful mind and a heart full of humanity. Many might suppose the style was too easy—flippant perhaps—for an introductory lecture to a class of young men about to enter upon so grave and severe a study as that of medicine, and better suited to the popular ear and apprehension of the million. We do not think so. The study of medicine is dry enough to all beginners, without frightening them *en limine* with the idea that the course is so toilsome and fatiguing, it will be useless to undertake it in earnest. Many are thus prevented from studying as much as they would otherwise, and finally resort to that abominable system, so fashionable of late years in and around our Medical Schools, of cramming on the part of teachers, and mechanically memorizing on the part of pupils. We remember a bright and noble fellow, who was sadly discouraged by listening attentively to one of those dreadful introductory lectures which represent the study of Medicine as severe beyond measure and laborious in the extreme. The lecturer trimmed the midnight lamp every few sentences and employed the intervening ones to pile up volume upon volume, Pelion upon Ossa high, that must not only be read, but diligently studied and inwardly digested, until the poor fellow's heart failed him. He said he would return home and try some other pursuit in life. He felt assured the study of medicine was too much for him. He would have to read as many musty volumes as were in the Bodlean library, and study books enough to fill a room twenty feet square before he could claim to be a Doctor. He was in earnest, actually

got ready to leave Philadelphia, and it was after much persuasion he consented to stay and try it a while. He was beyond all question one of the first men in the class. But let us return to our mutton, as the French say, and give the reader a morceau that he may judge of its quality for himself.

"Hope is one of the best articles in the moral materia medica, and is accessible to almost everybody. It seldom yields to despair. When Pandora opened the precious box of heaven's gifts to man, all its contents evaporated save only hope, which remained to charm and cheer the world. Benevolence—good-will to mankind—is conducive to health. The angels' song was "peace on earth to men of good will." Charity, the satisfaction of duty performed, and contentment, contribute to health and longevity. A reasonable and calm survey of the world is a potent check on the base, depressing disease-producing passions. The philosophers—such as Socrates, Plato, or Seneca—estimate things about as they deserve. Wealth and the world's applause are well enough, but they are very precarious; and then life is so short. When men acquire them, the startling idea obtrudes itself that their enjoyment is transient. Not be thus, suffices—"but to be safely thus." Though it is human nature to desire these things, they are hardly worth breaking our necks for. They rarely pay the toil and anxiety occasioned by their pursuit. They are like Dr. Johnson's show, "worth seeing, but hardly worth going to see."

We all seek happiness in some way or other.

> "Some place that bliss in action, some in ease:
> Those call it pleasure, and contentment these."

I should place it in a reasonable combination of the two—reasonable effort to acquire the good things of the world, and contentment with one's lot. If we but knew the annoyances, the troubles, the vexations, of those who rank above us in the social scale, we should envy them less: they have but exchanged the quiet valley for the stormy mountain height. You will find more contented-looking and happy faces amongst a group of laborers taking their frugal meal under the shadow of a wall, than amongst the merchant princes on 'change. Thank God the blind beggar can dance and the cripple sing! and that the world's great majority—the poor—are as happy, to say the least, as the minority. They have more courage, too, than the children of fortune, and they bear the ills of life with less whining and repining. Often I have looked on their calm, heroic faces in adversity and suffering, and thought that they were surely the favorites of heaven. They exhibited what, were I going to write about it, I would term latent sublimity: more pleasing, doubtless, to God and

good angels than the public benefactions and sacrifices chanted by poets and panegyrized by orators.

Think you that you would be happy with ten thousand dollars more? You would want a hundred thousand worse than you did the ten. Had you millions, you would set up for an aristocrat, and have servants in livery. Were you a duke, you would sigh that you were not a prince or king; if a king, that you were not an emperor. If Napoleon, you would be discontented that your empire was not as large as that of Russia. If you owned the world, you would fall out with Prof. Mitchell and the other astronomers for telling you how very small it is compared with some other worlds. Before you had gone so far in this, however, ten chances to one you would commit suicide because you had been so successful.

To covet, to envy, to hate, is base, unreasonable, unwholesome. The man who has insulted you is probably sorry for it, but has not the courage to ask your pardon; the slight which made you sleepless may have been unintentional; the evil which you apprehended is nearly always imaginary; if you have led an honest life and paid your debts, the shafts of slander will fall harmless at your feet. Even if your record is not immaculate, despair not; do better for the future. The loss of a part is no reason why all should be thrown away. If a man has done badly all his life, it is no reason why he should not put the best foot foremost even in walking from the prison to the gallows."

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"Then there is the hypochondriac, moping about because he has not a good appetite. He sighs over a sour stomach—feels his own pulse—notes every feeling, and worries his friends with symptoms as numerous as St. Anthony's devils. Look up my friend! Change that old thread-bare black coat: it looks as if it had the hypo itself! Put on a jaunty frock of olive, or a "long-tail blue"—wear a better looking hat—get new boots, a handsome vest, and an unexceptionable cravat. Spruce up! Now look in the glass! Don't you feel better? If you do not, I would advise you to travel. But remember all the time, that night turns to day, winter gives way to spring, storms die in calms: and that distress and suffering, when borne with manly fortitude, are often but the harbingers of happy years to come.

How careful should we be in our intercourse with our fellow beings that we excite no unhealthful feeling! An unkind word may excite disease. I read but the other day of a young lady who died of mortified feelings, from having received an insulting valentine. The poet John Keats was killed by an article in the Edinburgh Review. Paper bullets are sometimes as fatal as leaden ones. Lawyers stand abuse and ridicule better than any other class of men; this is explained by the fact that they become gradually acclimated to it.

The sick especially need cheerful, sympathising looks. It half cures them oftentimes to know that they are cared for; and it is enough to

make any one feel sick to feel that he has no friends. When the mind is cheerful and courageous, the body more powerfully resists the causes of disease than when it is depressed and despairing."

We are under obligations to Messrs. S. S. & W. Wood, 389, Broadway, New York, through the hands of W. L. Pomeroy, Esq., of this city, for Bodenhamer on the Congenital Malformations of the Rectum and Anus, Camplin on Diabetes, Lyons hand-Book of hospital practice, and for extensive catalogues of Medical, Scientific and other Books. Bodenhamer on the Congenital Malformations of the Rectum and Anus is the most complete work of the kind that has ever been published. It is handsomely printed, with clear type, on good paper, well illustrated by plates and exemplified by cases, and presents a complete and accurate exposition of the Malformations of the Rectum and Anus, their etiology, pathology classification and treatment. There is no such work to be found in this or any other country, and the author deserves the thanks of the profession for the painstaking and labor which he has successfully employed in collecting together and putting into practical form the Medical literature upon the subject. It ought to be in the library of every practitioner of Medicine.

Camplin on Diabetes professes to teach a successful method of treating this obstinate and troublesome disease. It consists chiefly in putting the patient on Bran Bread. The Bran should be ground so fine that it will not operate on the bowels; while the principle of cure consists in furnishing the patient with a wholesome article of diet in which there is no starch or gluten to be converted into Sugar. It is reprinted from volume xxxviii of the Medico-chirurgical transactions, published by the Royal Medical and Chirurgical Society of London.

The Hand-Book is intended specially as a guide to students in prosecuting their studies and researches in hospital practice. But it will also be found useful in many respects to those young practitioners who are chiefly engaged in country practice.

Baillière Brothers, 440 Broadway, New York, have sent us a work on Diphtheria, by Edward Headlam Greenhow, M. D. which they have just published. This is a reprint from an English work, which the enterprising publishers were induced to bring out from the prevalence at this time of Diphtheria in this country, and the daily demand for a recent and practical treatise on this disease. The author is considered one of the ablest English writers on epidemic diseases, and this work is founded partly upon the study of Diphtheria in private and public practice, partly upon information obtained in the course of an inquiry into the causes, symptoms and treatment of this disease made for the Privy Council in 1859, and from eminent practitioners throughout the country, who had been most extensively engaged in its treatment. It is especially valuable as presenting us with a complete and reliable English view of the nature and treatment of Diphtheria. The price of this little volume is one dollar and twenty-five cents.

While upon this subject, we call the attention of the reader to the fact, that we have published in this number of the Journal, notwithstanding it presents some extreme views, with which we do not entirely coincide, a well written and maturely considered article on Diphtheria, by R. R. Livingston, M. D. of Plattsmouth, Nebraska Territory. The observations of this writer led him to arrange the cases of Diphtheria which he witnessed and treated under two heads, viz: *Sthenic* and *Asthenic;* and his experience justified him, in treating what he considered the *Sthenic* form of the disease, in the bold use occasionally of the lancet, "always opening a large orifice and obtaining a full stream." Whether the external conditions of this country have so far influenced the morbid manifestations of the human constitution, as to cause Diphtheria to present a more *Sthenic* character in Nebraska Territory than it has done in the more eastern and Atlantic States, and on the continent of Europe, we will not undertake to determine. But the questions are settled beyond all controversy, by the concurrent testimony of the profession in

this country and in Europe, that Diphtheria must be placed in the category of *blood diseases*, and that it must be considered essentially *Asthenic* in its character.

The American Journal of Medical Sciences for January, publishes the prize essay of Dr. Slade, of Boston, on Diphtheria, to which the Fiske Fund Prize for 1860, was awarded. We are sorry that the extreme length of this learned and finished production forbids our transferring it to our pages. We must content ourselves with giving the conclusions at which the able essayist arrives. The author, first of all, gives Bretonneau's description of the disease, and then compares it with the various epidemics that have prevailed at different times in Europe and America; carefully points out the distinctive characteristics of Diphtheria and Croup and Scarlet fever; and with much pains and at considerable length, discusses its pathology, and the question of its infectious nature. He comments upon the presence of albumen in the urine, and attaches considerable importance to a knowledge of this fact; and finally comes to the following conclusions:

"1. Diphtheria is a specific disease. This fact is shown by its origin, its progress, its manner of termination, and its sequelæ. 2. Its diagnostic sign is the formation of an aplastic membranous exudation upon any portion of the cutaneous or mucous surfaces, which is exposed to the contact of the atmosphere. 2. It is propagated by infection and contagion and is both epidemic and sporadic in its invasion. 4. Its characters plainly indicate that it belongs to the category of *blood diseases.* It is not allied either to cynanche trachealis or scarlatina. 6. The treatment is to be directed to the control of the exudation, and to the support of the constitution by means of tonics, stimulants and nutritious diet."

The author thinks, as we have no specific remedy capable of arresting this disease, that our main duty consists in *conducting* the patient safely through it; and as the principal indication is to support the powers of life from the first, neither leeching, or other local bleeding or even purging should be thought of, excepting in very rare instances. Stimulants, tonics and nourishment should be employed early and

steadily persisted in. Among the tonics for internal administration, quinine, iron and chlorate of potash are held in highest estimation; and the tincture of the sesqui-chloride of iron seems to be preferred by a majority of practitioners. It is to be given in doses of from ten to twenty drops every three or four hours.

The local applications that seem to merit special confidence are, nitrate of silver in solution, thirty to sixty grains to the ounce of water, muriated tincture of iron, and hydrochloric acid. They may be applied with a sponge probang, and in the cases of children with the camel's hair pencil. Gargles of chlorate of potash alone, or in combination with hydrochloric acid,or the tincture of sesqui-chloride of iron, and also of tannin, salt, &c., have been found beneficial. If all else fail, the author thinks,when the larynx and trachea are invaded by the exudation, that the operation of tracheotomy ought to be performed.

This admirable essay concludes with an account of the treatment recommended by many of the principal European practitioners.

Dr. James H. Dickson, of Wilmington, this State, has sent us his report on the Medical Topography and Epidemics of North Carolina, extracted from the transactions of the American Medical Association, and printed in pamphlet form by Collins, 795 Jayne Street, Philadelphia. The Doctor's fine literary taste, cultivation and professional learning eminently fitted him for this task; and it is a proper subject of regret that the reports, which he was able to procure from different portions of the State, were so meagre and imperfect. Our physicians have not paid sufficient attentention to the important work of recording in the transactions of our Medical Society, and in the Medical Journals of the country, their observations and experience as to the nature and treatment of diseases. Had they done so, this report doubtless would have been more complete and satis-

factory. It is to be hoped that our Medical men will be stimulated in future to write more than they do, and to publish what they write.

We transfer to our pages the Reporter's remarks on Bilious Remittent Fever, which he denominates the great endemic of Southern climates, and which unquestionably is the *Morbus Regionalis* of the entire eastern section of our State.

BILIOUS REMITTENT FEVER.

For many years, it may be said to have been the reigning epidemic of the entire eastern section of the State, of such uniform occurrence in the summer and fall, and so formidable in its character, that few who had the ability to remove to more salubrious localities, were accustomed to remain during the season of its prevalence, in the low country.

This form of fever, so unfailing in its periodical visitations, often beginning as early as June and remaining until the occurrence of frost, which generally takes place in the latter part of October, has of late years, lost much of its malignity in the low country, but seems to have acquired an increased power of diffusion, having gradually encroached upon the middle region of the State, and extended itself almost to the base of the Blue Ridge Mountains.

A few years ago the remittent and intermittent forms of fever were as prevalent in Salisbury, Concord, and Charlotte, in the middle reigion of the State, as in any of the counties on the seaboard.

I am informed by physicians resident in the mountains, that these forms of fever are never known to originate there, but are not unfrequently inported by travelers, and that the mountaineers look upon a journey to Charlotte or Salisbury in autumn, with much the same feeling of apprehensions with which an inhabitant of either of these towns would regard a visit to Wilmington, or Washington, on the seaboard.

For some years past, remittent fever, as it has prevailed in the eastern or seaboard counties of the State, has been almost uniformly of a mild type; very rarely presenting the severe gastric derangements which constituted such troublesome and dangerous complications in former years.

Thirty years ago, this form of fever was frequently attended with a duodenitis which extending along the hepatic ducts and their ramifications, caused such a suspension of the functions of the liver as to lead to the retention of the elements of biliary secretion in the blood and gave to the skin that icteric hue which allied it closely, both in the popular and professional mind, with the yellow fever of the tropics.

As experience has taught us that quinine is entitled to the rank of the febrifuge *par excellence* in this form of fever, we have been able, of late years, to dispense with much of what formerly constituted the regular *armamentarium medicorum* in its treatment.

We have now but little use for sudorifics, effervescing draughts, cold affusion, or the lancet, and the disease is rarely suffered to run on long enough to give rise to organic complications.

In cases of much severity, or in which alarming indications present themselves, the abortive method of treatment by the rapid induction of a state of cinchonism has become a favorite plan of proceeding.

It has rarely been found necessary in this locality (Wilmington) however, in order to produce this effect, to resort to the very large doses of the drug which have been recently recommended in our medical periodicals and practised in other parts of the State. In the vast majority of cases which occur here, the system may be brought sufficiently under its influence by doses of from two to five grains every hour or two, until the muffled ear gives token of its peculiar influence upon the nervous system and the reduction of the excited pulse exhibits its influence on the vascular system.

One class of cases in which it is very desirable if not indispensable to bring the system very speedily under the influence of quinine is that which occurs in children attended with convulsions (*Febris Remittens Convulsiva.*) In this class of cases the first and sometimes the second paroxysm of fever may be unattended with the appearance of any alarming symptoms, but the third paroxysm is apt to be ushered in with a convulsion which seems to replace the cold stage of the same disease in adults, and which is always so alarming and dangerous an occurrence, as to make it prudent to cut short the disease at once by bringing the system very rapidly under the potent influence of the febrifuge.

For the very valuable suggestion upon which this practice is founded we are indebted to Dr. Henry F. Campbell, of Georgia. Detecting the fact that the convulsion was but a chill in disguise, and therefore liable like the chill to a periodical recurrence, he has put us on our guard and enabled us to ward off an imminent danger. I feel assured that by acting in accordance with this precept I have been enabled in a very large number of instances, to divest this form of fever of its danger.

Although quinine has the power of arresting the progress of every variety of remittent fever, even after local inflammations and congestions have been superinduced, still its salutary operation is greatly obstructed by such occurrences, In cases which will admit of delay, these local derangements should be relieved by the use of such local and general remedies, as may be indicated by the special complication; but in formidable cases, we should not hesitate to give it concurrently with those remedies.

The ordinary cerebral and lumbar pains, which inevitably accompany remittent fever, do not contraindicate its use. On the contrary, they are speedily relieved by it, and in many cases without the use of those *adjuvantia* which are commonly prescribed for their relief. When, however, these symptoms are more than usually violent, or unusually persistent, no prudent practitioner would neglect the use of ancillary measures.

Where there are evident symptoms of gastritis, as indicated by extreme irritability of stomach, especially when accompanied with vomiting of a *glairy white-of-egg-like* fluid, local depletion, a blister to the epigastrium and ice ad libitum will be found useful preparatory or co-operative measures.

The symptomatology and pathology of this form of fever so plainly point to the liver as an organ which bears in a large degree the onus of the malady, as to make it important that we should not overlook or neglect the remedies which experience has furnished us with for the purpose of rectifying its disordered functions.

The essential anatomical condition of this form of fever would seem to be, according to the views of Drs. Swett, Stewardson, and Howard, confirmed by the industrious and careful microscopic examinotion of Dr. Joseph Jones, of Georgia, to be that condition of the liver which they have designated by the term bronzed liver.

Dr. Jones, in his very elaborate and learned paper on Malarial Fever, published in the twelfth vol. of the Trans. of the Amer. Med. Association, attributes this peculiar color of the liver "to changes in the coloring matter of the blood, as is indicated by the fact that the blood from capillaries of the liver will not change from the dark reddish-brown and purplish color, to the arterial hue on exposure to the air. It is probable that the altered coloring matter from the destroyed disintegrated blood corpuscles, or from the blood-corpuscles acted on by the malarial poison without actual disintegration escapes, and permeates the surrounding tissues, and imparts the peculiar color to the liver."

In the same valuable paper it is stated that the glycogenic function of this organ is also frequently impaired. Whether this derangement of function is to be regarded like the bronzed color, as characteristic of this form of fever, can only be determined by more extensive observations.

But whatever may be the precise deviation of this organ from the healthy state, experience has demonstrated the advantage of such remedies as are supposed to possess cholagogue properties, among which mercurial cathartics rank highest with the profession generally.

Though decidedly sceptical with regard to the possession of any such property by any form of mercury, I still regard it (but solely upon empirical grounds) as a very valuable medicine for rectifying disordered, hepatic functions.

I have, I think, occasionally witnessed the sad consequences of neglecting the morbid condition of this viscus and relying too exclusively on the remedial powers of quinine.

The highly inflammatory type of remittent fever is rare in this locality (Wilmington), of late, and hence the use of the lancet is seldom required in its treatment. Instead of its being the general rule to bleed now, as it may be said to have been twenty years ago, bloodletting is a rare exception to the rule.

That bleeding was an indispensable remedy in the highly phlogistic diathesis, which prevailed twenty-five years ago, no man whose experience reaches over that number of years, will be likely to deny.

Whether the human constitution has been so influenced by the external conditions to which it has of late years been subjected, as to modify its morbid manifestations; or whether the nature of the disease itself through some occult modification of its exciting causes, has undergone some change, may not be very easy to determine. But that a very decided change has come over the manifestation of the disease and the indications of treatment within the last quarter of a century, is a fact testified to us from all quarters.

While it is indisputably true, that great and notable advances have been made in the diagnosis of diseases within the period under review, and we might, therefore not unreasonably doubt the accuracy of the diagnosis of our predecessors, who depended only on the rational symptoms, and by logical inference deny the value of their experience, as to the necessity or even utility of the remedy, this would only avail so far as regards the thoracic complications of the disease; for, as a general rule, although this disease presents more or less diversity of aspect in different years, it rarely changes its phasis to such an extent as to render its diagnosis a matter of difficulty.

We are not, therefore, warranted in condemning the practice or in ignoring the experience of the age which has just preceded us; nor in pluming ourselves on any demonstrated superiority in practice. Another cycle of twenty or thirty years may lead our successors to wonder at what they may have good reason to regard as our weak and inefficient *methodus medendi*.

That the type of disease varies from year to year, or within a series of years, is a proposition which has received the very general assent of the profession since the days of Sydenham; and although we may regard his ascription of it to some occult atmospheric constitution, as but a hypothetical solution of the problem, it will not be wise to disregard the great amount of observation and experience which has since been accumulated upon this point, and to conclude that because bloodletting does nos *now* seem to be a *sine qua non* in the treatment of inflammatory disorders, that it never has been entitled to be so regarded.

Extreme opinions on medical, as on many other subjects, rarely stand the test of time and experience, and though the aphoristic words of Hippocrates, "*experientia fallax judicium difficile,*" embodies a desponding truth, experience must, I presume, still be regarded, as the great arbiter both of opinion and practice."

We are indebted to the superintendent of the Insane Asylum of North Carolina, Dr. Edward C. Fisher, for the reports of the president and directors and superintendent of that Institution for the years ending the first of November 1859 and 1860. These reports, as a general thing, present the usual features and characteristics belonging to such documents. We were sorry to learn, however, from the special report of the Superintendent that there had prevailed during the past year an epidemic form of Dysentery of a fearfully violent character among the inmates of this establishment, commencing in the Spring and continuing "through the summer and a portion of the fall months."

The superintendent speaks in the highest terms of the faithfulness of the employees of this institution during this visitation; while it is certain that he fully recognized the importance and responsibility of his own trying position.

Speaking of the cause of this epidemic the report says:

"Of the probable existing cause of this malady, there is little doubt but that it was to be found in that peculiar condition of the atmosphere favorable to its development. The surrounding country shared in the like tendency; and although the disease was not of so grave a type, yet so general and decided were the characteristic symptoms, as to be justly regarded as epidemic dysentery."

The Superintendent in alluding to the number and character of the patients received into this Asylum during the past year, gives us the gratifying information contained in the following extract, which not only clearly proves the importance of this institution to the state, but also the great necessity of early attention to cases of Insanity. Too much weight cannot be given to this view of the subject; and we would remark further, that not enough attention is paid in

our Medical Schools to teaching the proper nature and right treatment of Insanity.

Of the admissions during the year, numbering fifty males and twenty-six females, and making a total of seventy-six, the far greater portion have been as heretofore, chronic, or cases of long standing. This contribution to those already in the house, continues to keep up a large number; and as the constitutional energies of many of them have been materially impaired by complications of physical and mental disease, will of necessity, continue to swell the annual list of mortality in a considerable degree.

The proportion of recoveries during the same time, to the number of admissions, has been twenty-eight per cent, while that of recoveries, to the recent cases in the same time, has been seventy-three per cent.

In this latter result, is strikingly illustrated the beneficial effects of subjecting the insane to early treatment.

We have copied from the London Lancet, an article by Dr. Wardell, on Enteric fever, in the hope that the subject will prove of some interest to our professional brethren generally in this State. Fevers of the continued type, the symptoms being displayed chiefly through the stomach and intestinal canal, are obviously increasing in our country; they also partake more and more of the asthenic character, and are attended more frequently by fatal results than formerly. What this is owing to, we will not pretend to determine; because we believe that the causes which have influenced it do not, in the present imperfect state of our knowledge of ætiology, admit of any satisfactory explanation. Having observed the disease developed in the most opposite states apparently of the animal economy, under the most dissimilar conditions of rank, age, sex and diet, we cannot resist the conviction, that the causes ordinarily assigned for it by authors are in a great degree imaginary. What amount of influence the electrical condition of the earth's surface, and superincumbent atmosphere exercises in determining this question, the actual state of our knowledge does not enable us precisely to estimate. But observation, and the records of science, and our own personal

experience, sufficiently demonstrate that electrical phenomena, and the changed relations between the electrical condition of the atmosphere and that of the individual, are closely allied with the amount of health enjoyed, and with the development of disease in the human constitution.

Subscribers.

We sent the January number of the Journal to all those whose names we found on the mail-book; and we shall do the same thing in regard to this, the March number, excepting where the Journal has been returned to us. In those cases the names have been stricken from the list.

We again call upon every one who gets this number of the Journal, and who has received the January issue, or whether the latter has been received or not, to come forward and pay up his subscription, if he desires to continue to take the work. In cases where the Journal is received, and the persons receiving it do not intend to continue to take it as subscribers, they should feel bound by every honorable consideration to return it, unless it is marked on the cover complimentary. Failure to get the first number, where the second is received, has been the fault of the mails, for we shall send the March number to those only to whom we sent the one for January. Should any one get the March issue, who had not gotten the one for January, and desires to continue his subscription, we will endeavor to supply him with the latter upon his sending us the subscription money.

We are determined to find out who are the subscribers to the North Carolina Medical Journal, if it is possible for us to do so. We distributed at least four hundred copies of the January number; about thirty or forty persons promptly returned it; and the names of all those who have paid up for the current volume will be found under the proper head. We shall, in each succeeding number, regularly publish the names of those who pay up their subscriptions.

ERRATA.

It is due to Dr. Manson, to state that he did not have the opportunity of correcting the proof sheets of his articles, and we therefore, insert the following as furnished by himself:

ERRATA IN DR. MANSON'S ARTICLE, NO. I.

On page 6, for "dead *medicine*," read "dead *matter*."
" 8, for "Homer should *have* waked up *where* he nods," read, "Homer should *have been* waked up *when* he nods."
On page 8, on last line for "*with*," read "*wit*."
" 9, on last line, for "might *have* placed," read "might *have been* placed.
On page 12, and other places, for "*Elberle*," read "*Eberle*."
" 12, for "*Larcone*," read "*Sarcone*."
" 13, for "Head *Plurisy*," read "Head *Pleurisy*."
" 27, for "distinctness of the cold stage,," read, "indistinctness of the cold stage."
On page 27, on 10th line from bottom, for "*his* form of pneumonia," read, "*this* form of pneumonia."
On page 30. for "Malliot," read "Maillot."
" 30, for "Grissolle," read "Grisolle,"
" 33, for "retracted," read "retreated."

ERRATA IN DR. MANSON'S ARTICLE IN NO. II.

On page 113, 16th line, for "the symptoms" read "these symptoms."
On page 114, 29th line, for "Bouilland" read "Bouillaud."
" " " 31st " " "Pneumenia" " "Pneumonia."
" " 115, 4th " " "accruing" " "occurring"
" " 118, 29th " "Simple Bilious Pneumonia" for Simple and Bilious Pneumonia."
On page 121, 4th line, for "Pneumonia Bilieuse" read "Pneumonie Bilieuse."
On page 125, 24th line, "Malaria Pneumonia" read "Malarial Pneumonia."
On page 126, Add (To be Continued.)

L c 2 Jnc He McKee

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Original Communications.

A Reply to Dr. W. T. Howard's Review of the "Essay on Malarial Pneumonia," which appeared in the Transactions of the Medical Society of North Carolina.

BY OTIS FREDERIC MANSON, M. D. MEMBER OF THE MED. SOC. OF N. C.

(*Continued.*)

THE FEBRILE ACTION IN SIMPLE PNEUMONIA.

With a view, obviously, of lessening the force of our observations on the differential characters of the febrile action in Simple and Malarial Pneumonia, and in opposition to the opinion that we have announced, that in the fever of the Idiopathic form, "a marked paroxysmal character is *seldom* or never observed," our reviewer, although admitting that "the paroxysmal and periodical recurrence of the febrile movement is undoubtedly the *leading distinguishing characteristic* of pneumonia, impressed by a malarious influence," still declares that "it is highly important to remember that in simple, uncomplicated pneumonia, as well as *all* other febrile affections there is almost always a *marked* tendency towards increase of fever in the afternoon, succeeded by as obvious a tendency to its abatement during the following morning, and that he "has *not unfrequently* seen cases of pneumonia, during his residence in *this section*,

in which the *strictest scrutiny* failed to elicit *any positive* and *reliable* evidence of a malarious complication and yet, nevertheless, the fever was *decidedly* remittent and *paroxysmal.*" Discarding the observations of our critic in support of this opinion, not strictly germane to the subject, let us examine the authorities and facts upon which he relies to support these views. We quote them in the same order and in his own words:

1. *Wood.* "In his description of Simple frank pneumomonia, Wood distinctly states that the fever often has a remittent character, excerbations occurring daily for the most part towards evening."

It is true,as our reviewer states, that this writer asserts that in "Common or Lobar Pneumonia," that the fever often has a remittent character with daily evening exacerbations "accompanied with *increase* of pain, cough, dyspnœa and bloody expectoration," but we are far from being satisfied that this author however high may be the position which he occupies has not drawn the feature from the observation of malarial cases. Perhaps, like one at least equally as eminent in his position and in his productions, he may have mistaken an idiopathic for a symptomatic form of pneumonia. In the hospitals of Philadelphia from which doubtless, Dr. Wood has principally drawn the materials of his work, we have reason to believe that a vast number of cases of malarial disease are annually admitted, and it is therefore highly probable that the "*malarial law,*" of which, our critic so flippantly speaks, often asserts its sway over the subjects in those institutions. Dr. Watson, the eminent authority to whom we alluded in this connection, has the following remarks: "All that I have hitherto been saying relates to acute pneumonia occuring in a previously healthy subject. But Pneumonia having that character and so occurring, is a much *less common* disorder than *most persons appear* to *suppose* and than *I formerly thought* it to be. I have been surprised to find how *few* cases of *pure idiopathic* inflammation of the lungs present themselves among my

hospital patients. *Five or six* in the year are as many as I see there."* If this be the result of the matured and extensive experience of one whose observations were made in one of the largest hospitals of London, a locality usually supposed to be one of the most favorable for the occurrence of Simple Acute pneumonia,† we should reasonably suppose that Dr. Wood would meet with still fewer cases of that form of disease. At any rate, Dr. Wood may be justly charged with palpable inconsistency of opinion, for, further on in treating of Bilious Pneumonia, he states among "the *peculiarities* derived from the *miasmatic* complication," that "the fever is always remittent, generally with daily exacerbations." Now if, as he asserts in "Common lobar pneumonia," the "fever often has a remittent character with daily exacerbations" *also*, it is a contradiction in terms to pronounce it a "*peculiarity*" at all. It is in fact, tantamount to asserting in one breath that the paroxysmal and periodical character of the febrile movement in Bilious Pneumonia is diagnostic, and in the next denying that it is diagnostic. We submit therefore, that the evidence of this witness invalidates itself and therefore should be set aside.

2. Bouchut. Our reviewer continues "In the pneumonia of *infants and children at the breast*, Bouchut directs special attention to the remittent character of the fever. He says "the *continued type* is as is known *very rare; much more frequently the fever is remittent.*" Our reviewer's quotation is correct so far as it goes, but he stops short as soon as he reaches a point which does not suit him, for Bouchut continues, "that the *remissions* appear at *irregular* intervals and occur in a very marked degree towards *night.*"‡ All this,

*Lectures on the Principles and Practice of Physic, p. 587 2nd. Am. Ed.

†"The physical climate of Britain is a sufficient explanation of its prevalence." *Williams Cyc. Pract. Med. iii*, 594.

C'est à Londres que cette affection parait avoir son *maximum de fréquence. Grisolle Traité de la pneumonie, p.* 125.

‡Traité Pratique des Maladies des Nouveaux Nes et des Enfants à la mamelle Paris 1855, p. 354.

however, occurs when the disease is advanced in its progress; for at its commencement, this author observes "the fever is almost absent," (*"la chaleur est presque nulle"*) thus presenting characteristics entirely unlike those observed in simple or malarial pneumonia.

But supposing that the febrile phenomena in the pneumonia of new-born and suckling babes was identical with that observed in the pneumonias of adults, we are at a loss to know what possible connection there can be found between that disease and the subject under discussion. If we examine the works of those who have treated the subject of Infantile Pneumonia *ex professo*, we shall readily perceive that the majority of them like Bouchut had particular reference to that form of disease termed *lobular pneumonia*, concerning which there is extreme doubt as to its being in many cases a peumonia at all. It had long been observed that new-born and nursing infants were subject to a disease in many instances manifesting some of the symptoms and signs referable to the lungs, such as cough, dyspnœa, mucous and subcrepitant râles with or without percussion-dullness and others in which these indications were faintly or obscurely expressed, in whom the lungs presented post mortem appearances which were eagerly seized upon by gentlemen of the anatomical school as evidences of an inflammatory character. In these autopsies the parenchyma offered apparent congestion and induration of isolated lobules surrounded by healthy tissue, which in some cases were so numerous as to involve the larger portion of a whole lobe and affecting both lungs. For a long time these little innocents were bled, leeched, purged and antimonialized into heaven by these exclusively orthodox gentry, under the influence of the sole and indivisible idea they possessed, of its inflammatory origin, until an old German Doctor named Jörg, with none of those mystical and transcendental proclivities which our critic, in his ignorance of the vast and solid treasures which Germany has poured into the lap of science, deems them universally imbued,

bethought himself that this so-called *lobular pneumonia* might be nothing more than lungs imperfectly expanded and thereupon with a bellows blew up at once the collapsed cells and the pathologists of one idea.

Now this is the affection by Jörg termed Atelectasis which Bouchut and others before him evidently confounded with true parenchymatous inflammation, and which, according to Hasse "composes the greater number of cases occurring at the earliest period of infantine life and set down as pneumonia."[1] This is the disease or its analogue (collapse occurring *after* expansion,[2]) whose victims we too often recognize in those chicken-breasted children sinking with marasmus and hectic, now irrelevantly lugged into the discussion by our critic, to rebut the diagnostic importance of the paroxysmal and periodical febrile action in Malarial Pneumonia.

Of course we do not dispute that new-born and nursing infants may be affected with true lobular and even lobar pneumonia, but from our own observation we believe that Primary Idiopathic Pneumonia of any form, to be a very rare disease in young infants, and in this opinion we are sustained by Billard,[3] Gerhard,[4] Chomel,[5] Rilliet et Barthez[6], Swett,[7] and Bouchut[8] himself.

3. Morehead. In his *résumé* our reviewer returning to the subject says, "It is very true as we have previously stated, that in Simple, uncomplicated pneumonia the fever may be decidedly remittent and paroxysmal, and *we believe with* Morehead that there is often a *relation between* the fre-

[1] Pathological Anatomy, Syd. Soc. Ed. p. 256.

[2] First investigated by M. M. Bailley and Legendre, see West's Dis. of Children, 2d Am. ed. p. 159.

[3] Traité des Maladies Enfants Nouveau nés et à la mamelle, Paris, 1837, pp. 562, 569.

[4] Am. Journal Med. Sci. 1834, p. 97.

[5] Dictionnaire de Médecine, 2me ed. tome xxv, Paris, 1842, p. 187.

[6] Maladies des Enfans, Première partie Pneumonie, Paris, 1837, pp. 28. 76, 78.

[7] Treatise on the Diseases of the Chest, 1852, pp. 93, 94.

[8] Op. cit. p. 364.

quency of the occurrence of this type of fever and *asthenic state of the system*, but the fever is rarely as decidedly remittent and paroxysmal as it is habitually in pneumonia connected with a malarial diathesis."

We have never observed a more ingenious mutilation of a plain record, or a more artful suppression of an author's views than that contained in the foregoing paragraph. From its whole tenor our *reviewer* has evidently designed to convince the reader that this writer (Morehead) whom he unreservedly lauds as an "accomplished physician and pathologist" had attributed the periodicity of the febrile movement in the cases of pneumonia he observed solely to an "*asthenic state of the system*," and *not* to the influence of *Malaria*. But what are the facts? Why that this writer, so far from sustaining the views of our critic, that in simple *uncomplicated* pneumonia the fever may be "*decidedly remittent* and *paroxysmal*," positively implies the very reverse, and on the other hand, attributes the remittent character of the fever which he observed, not only in Primary, but in Febrile Pneumonia (as he terms the malarial disease) as well as in Surgical fever to the *influence of Malaria*, thus positively and clearly implying that the *fever in Simple* pneumonia *divested* of *malarial* influence did *not* partake of the periodical and paroxysmal nature at all. To prove all this it will only be necessary to quote this writer's own language fairly and unabridged.

In his chapter on Pneumonia, under the head of symptoms, he thus states, "the remittent character of the fever was well marked in *all* the cases of the *febrile form*. It was also distinctly observed in a *considerable* proportion of the cases of *primary pneumonia*. The *remittent* character of *symptomatic fever* is of frequent occurrence, both in the *medical and surgical practice* of this hospital and may be regarded as a feature of symptomatic febrile disturbance in the *natives of India*, generally more particularly in the *asthenic*. It is of practical importance to watch for the remission for reasons to be explained when the treatment of

pneumonia comes under consideration. *This remittent type of* symptomatic fever probably depends on THE INFLUENCE OF MALARIA PRE-EXISTING IN THE CONSTITUTION and is excited by local inflammation, just as *intermittent fever may be excited* by exposure to cold in the same state of the system. The inflammation is the cause of the fever. The state of constitution previously engendered BY THE INFLUENCE OF MALARIA *determines the type* which that fever assumes. But whatever the true explanation may be, the fact is undoubted that symptomatic fever in *asthenic natives* affected with pneumonia *in Bombay* is in many instances markedly remittent in type. So much so indeed that it is frequently a difficult question of diagnosis whether the particular instance ought to be classed as primary or febrile pneumonia."* And *again* in his remarks on "Treatment," this writer reiterating the same views continues †"In my remarks on "Symptoms," I stated that the *symptomatic fever* of *primary pneumonia* in *asthenic natives* is not unfrequently *distinctly remittent* in type, and it seemed to me *reasonable to assume* that it *became* so *in consequence of the* OPERATIVE INFLUENCE OF MALARIA. Actuated by *these views* I have latterly in *all cases* in which the remission was well marked *given quinine* in combination with antimony in the *same manner* as in the *febrile cases* and very frequently with the *same good effect*, though I think that the improvement in the lung has taken place more slowly."

If in addition to these clearly expressed opinions of this author, the reader will remember that the writer possessed opportunities of contrasting pneumonia occurring in the population of England (the work being published in London by the author himself whilst on "sick leave") with that occurring in the asthenic natives of India, *asthenic* from the "*influence of malaria pre-existing* in the constitution," he must readily agree with us that this writer, so far from confirm-

*Clinical Researches on Disease in India. Second Edition, London, 1860, pp. 527–8.

†Op. cit. 542–3.

ing the statement of our Reviewer that "in Simple uncomplicated pneumonia, the fever may be *decidedly* remittent and paroxysmal," presents evidence directly to the contrary, and that our critic in calling him to his aid like an unlucky "engineer is hoisted with his own petard."

4. *The Sprightly School Girl.* But our reviewer, in further proof and illustration of his original views as to the "paroxysmal character of the fever in simple uncomplicated pneumonia" now gives a case. Here momentarily dismounting from the rickety three-legged stool of the critic upon which he has been so long doubtfully poised, he opens his note-book, comes forward and becomes self-metamorphosed into an author. The case is an instructive one, as all cases are when faithfully recorded and properly viewed. We quote it in our new author's own words:

"We have not unfreqnently seen cases of pneumonia during our residence in this section, in which the strictest scrutiny failed to elicit *any positive* and *reliable evidence* of a *malarious* complication, *and* yet, nevertheless, the fever was *decidedly remittent* and *paroxysmal.* During the month of March of the present year, we attended a sprightly young girl, ætat. 13, in one of the female schools of this village, who had a pneumonia of the summit of the left lung. Every morning there was a MARKED *remission in the fever,* the pulse fell 23 or 24 *beats* in the *minute,* became *softer* and less *expanded,* and the skin lost *much* of its *febrile heat.* Our special attention was given to this case, and it was *watched* with the most assiduous care by *highly intelligent attendants.* Had there been any evidence of a *chill,* unusual "coolness of the extreme parts," or a remarkable "reduction of temperature confined to the ends of the nose, toes and fingers," to which Dr. Manson directs our attention as being "almost invariably observed during the morning hours," and just before the rise of fever in *his* "malarial pneumonia"—such phenomena could not have escaped detection. Indeed, the case was watched with special reference to Dr. Manson's description of that form of the disease. This young girl did not *come from* a malarious region, and her mother informed us on her arrival, that her daughter had never suffered from any *form of periodic fever* in her life. She has certainly had nothing of the kind since. The case yielded kindly to treatment in about a week, without the *employment of quinine, or any other antiperiodic agent.* We have attended SIMILAR CASES with physicians of long experience in the diseases of *this region of country,* in which had there been *any trustworthy evidence* of a malarious implication, it defied our powers of perception. And he must, indeed, be an extremely careless or incompe-

tent practitioner, who could overlook phenomena so prominent and self-imposing as those described by Dr. Manson as marking the "febrile action" of "malarial pneumonia."

We are free to confess that we have never seen so many errors in fact and logic, associated in one paragraph, as we shall easily prove to exist in this recountal of a single case, a case given as an example of simple frank pneumonia. Our critic, after declaring that "the *paroxysmal and periodical recurrence* of the *febrile movement*" to be "the *leading, distinguishing characteristic* of pneumonia, impressed by a *malarious* influence," gives this case as an instance in which "the *strictest scrutiny failed to elicit any reliable evidence* of a *malarious* complication;" and yet, "the fever was *decidedly paroxysmal* and *remittent*." If this is not a flat contradiction in terms, we are benighted. Though asserting that "*undoubtedly* the *most constant, most prominent*, and therefore the *most reliable distinguishing characteristic* of pneumonia impressed by the *poison of malaria is* the *marked periodical exacerbations* and *remissions* of the *febrile* movement," he yet denies that there were "*any trustworthy* evidences of a *malarious* implication" in this case (or "similar cases") although "*every morning* there was a *marked remission* in the fever, the pulse fell 23 or 24 beats in the *minute*, became *softer* and *less expanded* and the *skin* lost *much* of its *febrile heat*." And why? Upon what grounds does he contest the malarial character of the case? Oh! incomparable logician! Oh! acutest of critics! Why, because, forsooth, in the *First* place "the chill" was not detected by the "highly intelligent attendants." *Secondly*, because "this young girl did not *come from* a malarious region," and *Thirdly*, because "the case yielded kindly to treatment in about a week *without* the employment of *quinine* or any other anti-periodical agent."

These arguments can be easily disposed of; not one of them will hold water for a moment.

1st. Because the chill was not detected. We will remark in the first place, that as Dr. Howard asserts that in Mala-

rial Pneumonia, "he is unable to verify, from his own experience that the rise of fever is almost invariably preceded" by the group of symptoms we have designated by the term "insensible chill," he cannot legitimately lay claim to the absence of this stage as a proof that this case was *simple* and not malarial, and in the second place, that no matter how "highly intelligent" the "attendants" were who "watched this case," that their failure to detect it is far from being a conclusive proof that it did not occur, as we have on several occasions placed our patients in the care of "highly intelligent attendants," and who were on one occasion assisted by a "highly intelligent" physician who after watching twenty-four hours failed to detect the chill, yet on our arrival we at once convinced them that the patient was at that moment in the chill, the feet of the patient being very cold, though closely covered and a warm brick near them—which state was promptly followed by an intense and prolonged exacerbation of fever. We therefore reject the report of these "highly intelligent attendants" as competent medical testimony. We may remark *en passant* that if we have encountered more annoyance from one quarter than another in our professional career, it has been from the reports of "highly intelligent attendants"—composed, as they usually are, of garrulous old women, volunteer nurses and neighborhood quacks—a guerilla band who are ever hovering about and harrassing the flanks of the regular profession; and although it is the duty of the physician to gain all information bearing upon the welfare of his patient, yet in listening to their communications, if he does not weigh well and maturely consider them, he will almost inevitably be led into error. Indeed, it would seem that often with the best intentions to direct aright, they exert their ingenuity to mislead.

2ndly. Our critic in order to prove that the case of this "sprightly" young lady was non-malarial, further informs us that she did not come *from* a malarious region, and her mother (the old ladies again) informed us on her arrival,

that her daughter had never suffered from any form of periodic fever in her life."

Although we are here told that this young girl did not "come *from*" a malarious region, yet we are not enlightened concerning her previous whereabouts. We should have been pleased to have known the "local habitation" of this sprightly young demoiselle, that charmed spot in this southern clime untouched by the chilling breath of malaria. Perchance it is some enchanted isle full of—

> "Sounds and sweet airs that give delight but hurt not,"

where, like the peerless Miranda, she may wander forth serene, secure and invulnerable, though another "hag-born" Caliban should hiss—

> "As wicked dew as e'er my mother brushed
> With raven's feather from unwholesome fen,
> Drop on you."*

Alas! the wand of Prospero is broken and his book is buried

> "Deeper than ever did plummet sound."

But wherever dwelt this sprightly maiden, whether she *came from* a malarious region or not, is a matter of but little consequence in this discussion since it is certain she *came to* a place which does not enjoy entire immunity from malarial disease, the reverse of which is here obviously and clearly implied by our reviewer. Yes, we unhesitatingly affirm, from our own observation of diseases in that village, that malarial fever has originated there. In the epidemic of 1846, Warrenton suffered severely, and cases have since continued to occur there. It being only seventeen miles from my location, in that epidemic I often prescribed for at least forty patients a day ill with malarial fever, many of whom were in a few miles of Warrenton. Two of

*Tempest, Act. 1, Scene II.

the gravest cases of Malarial Pneumonia I ever witnessed, one in consultation with Dr. W. T. Hawkins, and another with Dr. A. Plummer, occurred within eight or nine miles of that place. Who will ever forget that never-to-be-forgotten chill with which old Dr. Pope (the former popular resident physician of that place) was attacked, and which the old gentleman recounted with such faithful and detailed minuteness, that he never (in his description) could get out of the cold stage at all. And yet, in the face of these facts, our reviewer would have us believe that this young girl's pneumonia was uninfluenced by malaria, because she did not "*come from* a malarious region." If she did not "*come from*" she certainly *came to* a region which, although like many other portions of the country in which malarial diseases are habitually epidemic, is now *comparatively* free from those affections, yet is far from being able to claim an entire exemption.—This limb of the argument therefore, also falls to the ground.

3rdly and lastly. Our reviewer is equally unfortunate in offering in proof that this case was non-malarial, the fact that "it yielded kindly to treatment in about a week without the employment of quinine or any other anti-periodic agent." This argument is hardly entitled to consideration, based as it is upon the groundless assumption that miasmatic diseases cannot be successfully treated without such measures being employed.

It is well known that cases of all forms and complications of malarial disease may recover without the employment of "quinine or any other anti-periodic agent."

When we first settled in this region, the common practice among the most eminent physicians in the most pernicious cases was little else than expectant—quinine being withheld until a decided remission or intermission occurred, in fine, being wholly denied to the patient until nature, unaided, was obtaining the mastery over the disease. We well remember some of the gravest cases of the algid form which recovered "without the employment of quinine or

any other anti-periodic agent." Did this prove the cases non-malarial? Certainly not! Surely our reviewer cannot therefore, from the circumstance of his sprightly school girl's pneumonia having yielded without anti-periodic agents, claim that the case was not, what we feel confident that it was, an instance of malarial pneumonia.

We should drop this case here did we not believe that a dangerous practical precedent is involved in the conclusions of our reviewer. Although *this* "*case* kindly yielded to treatment without the employment of quinine or any other anti-periodic agent," we are not so sure that this would be the usual result of the omission—and we do not hesitate to say that it was even in this case, unsafe practice to withhold it. We deny that Dr. Howard has any respectable authority (and surely there is no reason) for neglecting the use of quinine in cases of pneumonia, which like this, was characterized by evident remissions. Certainly he receives no support in such omissions from Morehead, his "accomplished physician and pathologist," whom, as we have seen, gave quinine "in *all* cases," even those which he considered "primary," "in which the remission was well-marked in the same manner as in the febrile cases," or from Grisolle, his "greatest of all modern standard authorities," who declares that the administration of the febrifuge (quinine) seemed to him the principal indication, and which should govern all others,"[1] nor even from his "learned and accurate," La Roche, who inculcates that, "whatever be the cause of periodicity in a disease, or rather whatever be the nature and cause of a disease which presents a well-*marked remittent* or intermittent character, quinia will be found a useful remedy in its treatment"[2] Thus endeth the comedy of the "sprightly school girl." We are compelled to confess, that notwithstanding the artistic construction of its plot and its happy *dénouement*, in spite of the vivacity of the

[1]Traité de la pneumonie, p. 727.

[2]Pneumonia and Malaria, p. 488.

heroine, the wisdom of *la mêre* and the intellectuality of the nurses who compose the *dramatis personæ*, that the piece has been damned on its first presentation. Authorship is clearly not thy vocation *mon frondeur;* already thou perceivest that it is more easy to cavil than to create—to depreciate than to excel,

> "A man must serve his time at every trade
> Save censure: critics all are ready-made."

Let us assist thee to remount thy tripod! there hast thou thy home—there thou reig'nst supreme!

In concluding the discussion of the febrile action in pneumonia, we would remark that we have had some little difficulty in forming in our mind a perfectly definite idea as to the precise opinions of our reviewer on the subject. He first states that in simple uncomplicated pneumonia, "the fever may be decidedly remittent and paroxysmal," and again, that in that disease that "the fever is rarely *as decidedly* remittent and paroxysmal as it is habitually in *pneumonia* connected with a *malarial* diathesis." Or in other words, that in Simple Pneumonia, the fever may be *decidedly* remittent and paroxysmal, but in Malarial Pneumonia, it is *more decidedly* remittent and paroxysmal. Well, we should say the "differential diagnosis" is here very delicate and nice—indeed it is tapered down to a very fine point. We must confess ourselves unable to discriminate between these contending superlatives—that we are unequal to the perception of these attenuated distinctions.

In strong contrast with the declarations of our reviewer that "he has *not unfrequently* seen cases of pneumonia during his residence in this section in which the *strictest scrutiny* failed to elicit any *positive* and *reliable evidence* of a *malarious complication*," and yet, nevertheless, "the fever was decidedly *remittent* and *paroxysmal*," and to his more unequivocal declaration that, "in simple uncomplicated pneumonia, the fever may be *decidedly remittent* and *paroxysmal*," we finally appeal to the record of him whom our reviewer

terms "the philosophic and lamented Drake," and whose work he extravagantly endorses as "having no parallel of its kind in Medical literature."

This writer, who not only had observed the simple frank pneumonias of the north, as well as the malarial pneumonias of the south, but who, "on examining his notes, found that he had conversed with more than *one hundred and fifty physicians* scattered from the shores of the *Gulf of Mexico* to those of the *Great Lakes* and who, to use his own language, was "guided by their experience, and that published by others in the journals, as well as his own in one of the middle latitudes, positively declares it as one of the principal guides "in reaching a diagnosis" between Simple and Bilious or Malarial Pneumonitis," that the *fever* INSTEAD OF THE CONTINUED TYPE OF THE PULMONARY PHLEGMASIÆ occurring in those who have NOT received a MALARIAL or autumnal fever *impress*, is subject to remissions even when most intense."*

To sum up. While willingly admitting that which is patent to all, that in a vast number of non-malarial diseases there is a tendency in the fever in some degree to increase in the evening, or at some other period, yet this by no means is usually followed by a "*marked*" regularly recurring remission on the following morning, "nor is the diurnal variation sufficient to characterize the change as "decidedly remittent and paroxysmal." If this were so, the diagnosis between Periodical and Continued fever would be difficult indeed,and the dscrimination between Idiopathic and Malarial Pneumonia, would be often an insolvable problem.

From this *exposé* of the authorities, facts and arguments of our reviewer, the reader will doubtless unite with us in the conclusion that his cases of supposed "simple pneumonia in which the fever was *decidedly remittent* and *paroxysmal* seen in this section," were only just so many blunders

*Diseases of the Interior Valley of North America, 2nd Series, p 869.

in diagnosis. Studying Southern diseases with Northern and Foreign books in his hand, and guided more by their teaching than by the results of his personal observation and independent thought, he has thus "*forced the forms of our diseases to bend to their descriptions.*"

THE ENTERIC SYMPTOMS IN MALARIAL PNEUMONIA.

If there was any portion of our essay which we should have deemed less obnoxious to criticism than another, we should have chosen our observations on the intestinal symptoms in this disease as being entitled to that distinction. But our reviewer affects to think otherwise. To him censure is congenial and commendation did not enter into the purpose of his *critique*. With the facility, however with which truth vindicates itself, and triumphs over error, "when left free to combat it," we shall substantiate the correctness of our narrative and refute his inconsistent and contradictory animadversions. As our remarks on these symptoms were very brief, we quote them entire:

"*The condition of the bowels in this disease* (*malarial* pneumonia) *and the latter* (*simple pneumonia*) *is very different.* In the *malarial form the intestinal canal seems generally to be in a state of phlogosis* OR exalted *sensibility.* This *is manifested by the frequent presence of diarrhœa*; and *when this is not evident by the hypercatharsis often induced by the mildest* aperients. *Later, when the disease succumbs, convalescence is usually announced by those characteristic, and we may say, critical evacuations before described.*" Among the symptoms denoting the termination in health, these favorable discharges were characterized as "*grecnish-black,* viscid *inodorous* stools, closely resembling tar in appearance."

In opposition to these statements, our reviewer advances the following: 1st. "That *all* diseases at the South evince greater susceptibility of the intestinal canal to irritating impressions than they usually exhibit in colder latitudes—that the intestinal canal is generally much more impressible in the South in *all* diseases than it is at the North—that in our climate this is a *normal susceptibility*—and that "*many cases* of *pneumonia*, particularly those occurring in

the spring months, offer this susceptibility very highly marked, and that too, in instances *not at all complicated by a malarious impression.*"

We may remark in the first place, that as our critic agrees that in the pneumonia of *this climate*—and *that is the pneumonia upon which we have written*, the bowels evince a tendency to diarrhœa, that the correctness of our description is thus endorsed, and that in this regard, it presents a striking contrast with the condition of the intestinal canal in Simple pneumonia as observed by any respectable writer, including his favorite authorities—that it is therefore what he denies it to be, diagnostic. It is true that our reviewer avers that in Simple pneumonia, by which we are led to understand that he designates those "many cases not at all complicated by a malarious impression," the bowels evince the same susceptibility, but we hold that it remains to be proven that these *many cases were* examples of *simple pneumonia.* We contest the assertion that "*many* cases of pneumonia" occur "in the spring months," or in any other months "in this climate," not at all complicated by a malarious impression.' Utterly rejecting the authority and esteeming the opinion worthless, of any one who like himself considers that simple uncomplicated pneumonia is "not unfrequently seen in this section," in which the fever is decidedly remittent and *paroxysmal*"—we equally repudiate the opinion that *simple idiopathic uncomplicated inflammation of the parenchyma of the lungs* is necessarily attended with "very highly marked susceptibility," or tendency to diarrhœa in this or any other climate. A glance at authorities, (and in justice to our critic and for the sake of fair discussion we will refer to those endorsed by him) will be sufficient to establish our declaration. Let us refer first to his "greatest of all modern standard authorities on the subject of pneumonia."

1. *Grisolle.* In fifty-one cases of Simple pneumonia observed by this writer, in which no purgatives were administered, he states that in "forty-two, the bowels were *consti-*

pated, and in the remaining nine, only a *slight diarrhœa* occurred."*

2. *Wood.* This writer observes that in "Common or lobar pneumonia," that vomiting and diarrhœa are *occasional* symptoms, the latter occurring in the advanced stages (and he might have added in the advanced stage of nearly every disease and therefore the statement amounts to nothing) but that whenever occurring, these symptoms were only "*accidental.*"[1]

3. *Swett.* In Simple pneumonia this author states without exception that "the bowels are *constipated.*"[2]

4. *Chomel.* This writer merely observes that in Simple Pneumonia a slight diarrhœa *sometimes* occurs "at an advanced stage" of the disease.[3]

5. *Andral.*[4] This author does not mention diarrhœa at all in his description of Simple Pneumonia.

But we forbear from further quotation; these are sufficient. Indeed, if all the authorities cited by our critic or ourselves are examined in relation to the condition of the bowels in simple pneumonia, they will be found bearing the same testimony, viz: that those organs usually present no disorder of function, but are generally constipated, and instead of presenting any "marked susceptibility," or "impressibility," they will be found withstanding the relaxing influence of the lancet, the emulgent and cathartic effects of calomel, and even bearing themselves stoutly up under the rapid attacks of tartar emetic *à haute dose.* If, however, we turn to the history of Bilious or Malarial Pneumonia, as recorded by those authors familiar with its events, how changed is the scene. Listen to Drake. Without saying one word concerning diarrhœa or "intestinal susceptibility" in his chapter on "Simple Pneumonia," yet, when he de-

*Traité Pratique de la pneumonia, p. 269.

[1]Practice of Medicine, ii, p. 11.

[2]Diseases of the Chest, p. 89.

[3]Dict: de Médecine, Tome xxv, 171.

[4]Clinique Médicale iii. (loc. cit.)

scribes "*Bilious or Malarial Pneumonitis*," the bowels no longer play a passive *rôle*, but forcibly arrest attention. This writer observes. "In some cases vomiting and *purging of bile* occur, in others there is no excretion of bile from the liver, which seems torpid, and by not pouring out its bitter and alkaline fluid into the bowels, permits *the occurrence of an exhausting diarrhœa*, being watery and so acrid as to excoriate the sphincter."[1] And what is the testimony of Wood. This writer, whom we have seen only mentions diarrhœa as an accidental symptom in Simple Pneumonia, yet observes that Bilious Pneumonia is sometimes associated with the more malignant forms of miasmatic fever,"[2] in which latter disease, he tells us that "the bowels may be confined, but *oftener* the reverse, the dejections being exceedingly copious and frequent in many instances, not less than several times an hour."[3] To these may be added the evidence of Swett, who as we have seen, declares that in Simple pneumonia "the bowels are *constipated*," yet in Bilious pneumonia, among the prominent symptoms he places "free bilious discharges with a tendency to a typhoid type."*

2. Our critic declares that there is no reason *a priori* known to us (him) why a malarious influence should necessarily impart to pneumonia, unwonted irritability of the bowels or engraft upon it a "state of phlogosis" of the intestinal mucous membrane, "and that to assume that this state of the bowels is owing to the action of that element in the absence of any demonstrable proof of its existence, is *simply* to *beg* the *question*."

As our critic has not been sagacious enough to perceive any reasons *a priori*, we will endeavor to enlighten him with *some reasons a posteriori*.

[1]Dis. Int. Valley, N. America, 2nd series, 869–70.
[2]Practice of Medicine, ii, 17.
[3]Ibid. i, 293.
*Dis. of the Chest, p. 104.

(a.) *Reasons deduced from Common Observation.*

Among the leading phenomena observed in all grades of Malarial fever there are exhibited a series of actions which although not strictly and absolutely peculiar to them, yet which, in the regular order of their occurrence, as well as in their unusual force of expression, may be deemed distinctive and have therefore, arrested the attention of all observers—the specific character of these actions consisting to use the concise language of Broussais, in "alternate determinations from the circumference to the centre and from the centre to the circumference."*

From this unequal distribution of the stream of life the interior organs necessarily receive an undue afflux, the consequences of which are not only revealed to the eye of the clinical observer in a series of organic functional perturbations, but are further disclosed by the knife of the pathological anatomist. In these events the intestinal canal participates, and although its implication is more conspicuously evident in the graver and pernicious cases in which, to use the expression of Wood,† "Life seems running out with the serous and serosanguineous discharges in striking analogy with epidemic cholera," yet it is still evident in the milder forms of the disease, which, as we have before remarked, differ from the former *in degree* and not *in kind*. Who has not seen the slumbering tendency to diarrhœa in the most benign cases roused into dangerous activity by an ill-timed cathartic? Who has not witnessed a simple chill thereby converted into a protracted cold stage or fatal collapse? Yet, in despite of these facts, known to all experienced and intelligent observers—our critic avers that there is no reason known to him, why a malarious influence should necessarily impart to pneumonia unwonted irritability of or engraft upon it a

* Histoire des Phlegmasies on Inflammations chroniques, Tome I, p. 130.

† Practice of Medicine, i. 294.

state of phlogosis of the intestinal mucous membrane and to "assume" that it does so "is *simply* to *beg* the *question.*"

(b.) *Reasons extracted from our critic's "Prayer Book."*

Although the pathology of Malarial fever, as set forth in our reviewer's *vade mecum*, which refers the morbid determinations to a "peculiar state of the innervation," is by no means original, having been as we have before stated, announced by Rayer and adopted by Guerin de Mamers and others; yet its mere sanction by our critic's repository of medical piety, ought of course to be sufficient with him to render it orthodox. In the following passage extracted *verbatim* from Professor Wood's chapter on "*Pernicious Fever*," "the *essential cause* of which he declares is *undoubtedly the same* as that of the *ordinary forms* of miasmatic fever," or as he definitely expresses it, "a more intense action of the miasmatic poison," the author thus explains the manner in which a malarious influence gives origin to those intestinal symptoms we have alluded to, by "*impairing innervation.*" "But how account for the oppression of stomach and the copious vomiting and *purging?* Upon the same principles exactly. There is no feeling of the stomach unless it may be excessive spasm, which is more insupportable than that arising from *deficient innervation.* This can be readily understood by those who have experienced the distressing sensations of a half-paralyzed limb. The *bloody serum* or *pure blood discharged* from the stomach and *bowels*, *escapes through the coats of the vessels*, exactly as blood percolates through the tissues after death; with this exception, that as the vis a tergo still continues in some degree, it adds a vital expelling force to that of mere physical transudation. *The alementary canal may be said to sweat like the external surface.* An appeal may be made to the discoloration, softening, &c., of the mucous membrane as evidences of inflammation or congestion. I am not disposed to deny the occasional existence of some degree of inflammation in this membrane. But it is quite insuffi-

cient to account for the symptoms. We do not witness the same phenomena in other cases of much more extensive inflammation. Besides, much of the softening of the tissue may be ascribed to depressed vitality, and much of the discoloration to the stagnation of blood like the livid or purple color of the skin."

It is true, as our reviewer states, that Dr. Wood declares that in ordinary Remittent fever, the bowels are usually constipated, especially in the *early* stages, and that he has seldom found much difficulty in procuring free alvine evacuations, yet, he adds the *stools* are generally *disordered,* sometimes dark-colored and offensive, that at a *somewhat advanced* period of the complaint, a bilious *diarrhœa* not unfrequently sets in and *dysenteric* symptoms make their appearance and that in some instances *looseness* of the *bowels* exists from the *commencement*—or even the complaint may be ushered in with a kind of *cholera-morbus.* Again, under the head "*Modifications,*" he states that inflammation of the bowels is not uncommon, though it occurs most frequently in the advanced stages, as indicated by *diarrhœa*, etc., and among the prominent diagnostic symptoms he places "the vomiting and *purging* of bile;" whilst in describing the "Anatomical characters," he states that "the mucous membrane of the bowels is *often inflamed.*" Now if we bear in mind that this writer considers that Intermittent, Remittent and Pernicious fevers are merely grades of the same malady, produced by the same cause—Malaria—it necessarily follows that if that cause acting in its extreme intensity gives rise to intestinal symptoms bearing as he says a "striking analogy to those of epidemic cholera,"* that the same cause acting with less force must give to symptoms of the same character however diminished they may be in degree, or at least a tendency thereto—just as the cause of Asiatic cholera may produce symptoms of every gradation in violence, from the slightest tendency to

*Practice of Medicine, i, 294.

diarrhœa to the colliquative flood leading to rapid and fatal collapse. So well is this tendency understood by practitioners familiar with Malarial fever, that as Drake truly observes in reviewing the cathartic treatment formerly adopted "that it has *grown into a saying* in many parts of the South that congestive fevers are made by this practice."*

(c) *Reasons Alleged by Drake.*

Although these have been already incidentally mentioned, yet as they are very brief, we quote the paragraph in which they are found:

"Such is the derangement of the biliary function in autumnal fever whether the attack be original, or occurring as a relapse, that in a large proportion of the cases now in our contemplation, bilious symptoms are decidedly present. In some, the secretion of healthy bile is excessive; the fur on the tongue assumes a dirty, yellowish tint, there is a bitter taste in the secretions of the mouth, vomiting and PURGING OF BILE occur, and now and then eructations of that fluid. Its presence is also manifest in the urine, the serum of the drawn blood, the white of the eyes, the skin, and as I believe, but not on conclusive evidence, in the sputa from the bronchial tubes. In other cases, the signs of a bilious deterioration of the blood are present, but there is no excretion of bile from the liver which seems torpid and *by not pouring its bitter and alkaline fluid into the bowels, permits* the occurrence of an EXHAUSTING DIARRHŒA, *the discharges being watery* and so acrid as to excoriate the sphincter."†

We have thus given to our reviewer, in the absence of any reason of his own, "why a malarious influence should necessarily impart to pneumonia unwonted irritability of the bowels," or tendency to diarrhœa, reasons from three sources. 1st. Those derived from COMMON OBSERVATION. 2nd. From the doctrines of *his* "PRAYER BOOK," and 3rdly. The theory of the "PHILOSOPHIC DRAKE"—arguments which we may characterize as reposing on the triple base of COMMON SENSE, RELIGION (our critic's) and PHILOSOPHY. If these do not convince him we must despair of his conversion, and

*Dis. Int. Valley N. A., p. 102.

†Op. cit. 869–70.

turn him over to some "learned and accurate La Roche" who inflicts five hundred pages* on "pathological and etiological heresies."

THE CRITICAL DEJECTIONS IN MALARIAL PNEUMONIA.

As the remarks of our reviewer embody our description of these evacuations and our views as well as his own in regard to their significance and value we quote those strictly relevant to the subject:

"Special character of the *intestinal discharges.* These come too late for useful diagnosis, and, we suppose are only adduced by Dr. Manson to complete the list of symptoms which he deems differential between "malarial," and other forms of pneumonia. In the former, we are told, "convalescence is *usually* announced by characteristic critical alvine evacuations," which are "greenish, black, viscid, inodorous, and closely resembling tar in appearance."

In certain cases of *remittent fever*, generally termed by authors *hepatic*, on account of the marked evidences of congestion and torpor of the liver, these peculiar dejections are said particularly to occur, and frequently to herald convalesence: hence they are thought to be in some measure critical. But in the *immense majority of cases of ordinary remmittent fever*, they are *not observed at all;* and by some of *our most authoritative writers of large experience*, are not even mentioned. In his essay on remittent fever, already referred to, Dr. Manson himself does not speak of their occurrence in his description of the usual course and progress of their disease; and only when indicating the diagnosis between it and typhoid fever, does he allude to them, and then only to say that they "almost certainly denote a favorable termination in" the former.

But the qestion arises at once—*how often are they witnessed?* We have long believed that they frequently occur from the administration of mercury alone; and in several instances we have proved it by withdrawing that agent. We do not hear of them so often now in our periodical fevers as we did formerly, owing to the administration of quinine early in the disease, and the more restricted and rational employment of mercurials: hence our inference, that they frequently resulted from the special action of these agents on the liver."

"Dr. Manson says that those critical discharges which usually announce convalescence in "*malarial* pneumonia," are "*inodorous!*" As he seems to have often met with them, he certainly ought to know; but they

*Pneumonia: Its supposed connection, pathological and etiological with Autumnal Fevers, p. 502.

are not always odorless, as we have good reason to be confident. We have seen them so offensive as to taint the apartments, affect the patients themselves with the most distressing nausea, and even drive the attendants out of doors. Bolling, Cartwright, Condie, Eberle, Stewardson and Wood, all speak of these peculiar stools as heralding convalescence in certain cases of remittent fever, but are silent, in regard to their being destitute of odor, while the observant Chapman states positively, that they are "*fetid.*"

"If Dr. Manson could succeed in *proving* that there is a "form of pneumonia *generally* seen by Southern observers," in which "convalescence is *usually* announced" by a particular kind of "*inodorous* stools," he will have taken an important step towards making out this case; for we are not aware that such an "affection" has "attracted the attention of recent investigators," or that it has been even "cursorily and imperfectly noticed by any of the modern standard authorities."

In order to reply to these confused and contradictory strictures, it will be necessary to determine,

1st. The physical character of these evacuations.

2nd. The frequency of their occurrence.

3d. Their diagnostic and prognostic value.

1. *Physical Character.* The discharges to which we here especially allude, to a casual observer, have a lustrous, jet black appearance; are of the consistence of viscid tar, without being very adhesive; in quantity, they may vary from two or three ounces to as many pounds. These excretions, when unmixed with other matter, have no appreciable odor, and flies or other insects, instead of being attracted by, seem to avoid them. On spreading a portion of this matter thinly on white paper it will, however, be discovered that, instead of being black, it is really of a very dark green color, and consists of meshes of soft fibres, mingled with a thin green mucilaginous fluid. These discharges are identical with those mentioned by some authorities as denoting a fortunate termination of malarial fever, and are usually considered as proceeding from the liver. Eberle terms them *black bile* and describes them as "black and pitchy," and again as "tar-like alvine discharges."* Wood characterizes

*Practice of Medicine, i, 133. Eberle's Notes, p. 42.

them as "a black tar-like liquid;"* and Dr. Lewis as discharges of dark bilious matter, and again, as "evacuations of thick black matter."† They are, however, silent in regard to their odor, though agreeing as to their import.

In opposition to the description given in our essay, of which the foregoing is a more minute account, our critic avers that "they are not always odorless, as he has good reason to be confident, that he has seen them so offensive as to taint the apartments, affect the patients themselves with the most distressing nausea, and even drive the attendants out of doors," and that "if we could succeed in proving that there is a form of pneumonia generally seen by southern observers, in which convalescence is usually announced by a particular kind of inodorous stools, that we will have taken an important step in making out our case."

Early in our professional career, when malarial diseases were exceedingly rife, our attention was called to the fact that this particular kind of discharge, the certain harbinger of a happy termination, was destitute of any disagreeable odor. An experience of nearly twenty years has confirmed the truth of the lesson then taught, and on the basis of that experience, we here unhesitatingly declare that the cases of any form of miasmatic disease in which a return to health is heralded by evacuations "so offensive as to *taint* the apartments, affect the patients themselves with the most distressing nausea, and even drive the attendants out of doors," must be of rare and exceptional occurrence. For ourselves, we never can regard any patient affected with any disease, as approaching sure and perfect convalescence whose discharges are very offensive, and we are equally as certain that a favorable prognosis based thereon must be usually fallacious. The observation is as ancient as medicine itself, that intestinal discharges occurring in any disease when possessing a black color and very offensive smell

*Practice of Medicine, i, 269, 295.

†Med. History of Alabama. N Orleans Med. & Surg Journal, iii, 698–9.

are ill-boding omens. "Those discharges are *deadly*," wrote the *Father of Medicine*, "which are *black* or fatty or livid or verdigris green or *fetid*."[1]

"A speedy death is indicated," said Celsus "when the discharge is liquid, and also either *black* or pale or fat, and especially if it has a *very fetid odor*."[2]

"In all stages of the disease," observed Sarcone in describing a malarial epidemic in Naples, "*black*, colliquative and *very fetid stools* were *dangerous* and *mortal*."[3]

"Fetid and colliquative stools," said *Alibert*, "indicate that the patient will speedily succumb."

"A *black* color and cadaverous odor of the fœcal discharges," *Chomel* declares "are always unfavorable signs."

It has been seen that our reviewer only cites one author as containing his statement in regard to the fetid odor of the salutary evacuations in malarial disease, viz: "the *observant* Chapman." As the question is one, which, strictly speaking, rather belongs to *olfaction* than *observation*, we cannot yield our positive experience even to those of that distinguished master, in a matter of *noseology*.

2. *Frequency of Occurrence.* Our reviewer in continuation of his remarks upon these benign evacuations, exclaims. "But the question arises *how often* are they witnessed: It is almost needless to answer this interrogatory, as he in the next sentence gives the reply himself. "We have long believed that they *frequently occur* (in remittent fever) from the administration of mercury alone, and in several instances we have proved it by withdrawing that agent," thus flatly contradicting his assertion in the paragraph immediately preceding that in the *immense majority* of cases of ordinary remittent fever *they are not observed at all*." Again if it is true as our critic states that in certain cases of remittent fever generally term-

[1]The Genuine Works of Hippocrates, Syd. Soc. Ed. i, 243.
[2]De Medicina, Ed. Rotterodami, 1750, p. 59.
[3]Histoire Raisonnée des mal. obs. a Naples, 2, 110.
[4]Traité des Fievres Int. p. 263.
[5]Pathologie Générale Universelle, v. 525.

ed by authors *hepatic* on account of the marked evidences of congestion and torpor of the liver, these dejections are said *particularly to occur* and *frequently to herald* convalescence," then he again answers his own question, for it will be remembered in discussing the bilious symptoms he has expressly declared that *bilious vomiting* and *other evidences* of *hepatic trouble much oftener* present themselves in pneumonia offering positive proofs of the *mingling of a malarious element* than when no such proofs are present," and we shall see hereafter that he endorses Drake's, Wood's, and Eberle's description of Bilious Pneumonia as among those of the "modern standard authorities," who have correctly delineated this disease, in all of which the bilious symptoms are prominently set forth. If, therefore, bilious vomiting and other evidences of hepatic trouble are "proofs of the mingling of a malarious element," and these black, critical evacuations *particularly* occur in remittents, generally termed by authors *hepatic*, on account of the marked evidences of congestion and torpor of the liver, then it follows that they must very frequently be *witnessed* in malarial pneumonia, which, according to the declaration of our reviwer himself "is merely the ordinary form of *pneumonia complicated* by the *impression* of a *malarial law*," and he therefore has unwittingly, furnished the proofs of our assertion that "convalescence is usually announced by these characteristic critical alvine evacuations." His own disjointed and contradictory statements, which, like stones, were thrown for our demolition, on being collected together thus form an arch of support to our text, and which the weight of his strictures (if they have any weight at all) only serves to strengthen.

Nor is the equally inconsistent admission of our critic that he does not hear of these critical discharges "*so often*," *now* in our periodical fever as he "*did formerly*," at all surprising, as one of the reasons assigned by him in the same sentence is amply sufficient to account for their absence—viz: "the early administration of quinine," which, arresting the disease at the onset, anticipates and prevents

the natural termination or crisis" of which these discharges are among the most prominent evidences. Certainly it could not be expected that the critical phenomena in any disease would be seen as "often" when the disease was artificially arrested in its course as when allowed to proceed unmolested to its regular termination. Of course, in our essay, the delineation of the natural course and progress of the disease was only attempted. No description could be termed faithful which embodied the history of cases cut short in their career. As we have said before, in the commencement of our professional life a mild expectant treatment being usually adopted, we had the most ample opportunities of observing this disease when unmolested by treatment, and it is from the cases observed then and from those occasionally seen since, in which art had not interfered, that the history given in our essay has been penned.

If our critic had carefully read the authorities whom he has merely cited on this subject, he would perhaps have refrained from his captious criticisms thereon. Eberle, in the "Notes of his lectures," in treating of the hepatic modification of Remittent fever observes that "towards the termination of the disease the liver, in *most instances*, pours out an abundance of dark-colored bile, which is evacuated by stool and sometimes by vomiting," and adds, "that the stools in such instances are black and pitchy," (p. 42,) and in his "Practice," reiterating these statements he observes positively that, "except the disease be arrested by remediate treatment in the early period of its course *there are but few recoveries in which such discharges do not occur.*"*

If it be objected to these statements that these evacuations only occur in "hepatic" cases, and therefore do not fully sustain our assertion that "convalescence is *usually* announced" by their appearance, we have only to turn to Eberle's description of the symptoms belonging to the

*Op. cit. i, 133.

general course of the disease in which the hepatic symptoms are prominently set forth, to find a sufficient answer. Among these he mentions an "icterode or yellowish tinge of the eyes," "bilious vomiting," "a sense of fullness and weight or tension on the right hypochondrium," and "bilious urine." Indeed, this author more unequivocally adds that "*more* or *less derangement* of the *biliary* system appears indeed to be a *universal attendant* on *remitting fever*," and in continuation he adds that "the tendency of miasmata to act upon and disorder the liver has already been particularly mentioned, and it may be presumed from this circumstance, independent of the phenomena of the disease, that prominent functional disorder of the liver, constitutes *one of the most constant* local affections of *remitting fever*."*

Nor does our critic's *Volume of devotional exercises* altogether fail to yield support to our opinions on this head. In his chapter on Remitting fever, *Wood* observes that "copious black tar-like discharges sometimes occur towards the close of severe bilious fever and are considered as a favorable sign especially in cases which have been attended with congestion or torpidity of the liver,"† and again in his observations on "Pernicious fever,"‡ he states that "it is usually deemed a favorable incident when copious alvine discharges of a dark tar-like liquid take place from the bowels as they indicate a restoration of the suspended action of the liver."

We close our reply to the inquiry propounded by our critic as to "how *often*" these discharges "*are witnessed*," with the remarks of Dr. Lewis in his Prize Essay on the Medical History of Alabama. In his observations on Remittent fever he states, "the disease after four or five days' duration, yielded under the influence of copious sweats and discharges of *dark bilious matter*," in other cases, "after the second or third paroxysms which were irregular in dura-

*Op. cit. i, 134.
†Op. cit. i, 269.
‡Op. cit. i, 295

tion, the disease gave way under the influence of copious evacuations of *thick black matter* and a general perspiration and again observes that *black* grumous discharges from the bowels were *very frequent* and always attended with happy consequences."*

3. *Diagnostic and Prognostic Value of the Critical Dejections.* The diagnostic importance of these discharges having been necessarily involved and established in the foregoing observations on their *frequency*, a few additional remarks will only be necessary in regard to their differential value. But our critic avers that they "come too late for useful diagnosis, and that he supposes that they are *only adduced* by Dr. Manson to complete the *list of symptoms* which he deems differential between malarial and other forms of pneumonia." Our critic, as usual, is wrong again. They *do not come too late* for *useful* diagnosis. A characteristic and frequently occurring symptom which stamps its seal on a class of important diseases and which points to a happy issue can never "come too late." If an error had been committed on account of its absence, it would not have been fatal, as the patient, on its appearance, is destined to recover, and it would throw a flood of light on the character of the endemic or epidemic present. If pneumonia was *prevalent*, these peculiar discharges alone would declare that the surrounding cases were not simple pneumonia, nor typhoid pneumonia, but a phase of that protean malady, that "wandering phlegmasia,"† malarial fever.—Nor were these discharges ominous of evil, instead of being prophetic of good, could it be truly said that they "came too late." How often, at the commencement of an epidemic in which the wisest have withheld, or erred in their judgment concerning its exact character, has the usually fatal "black vomit," which, however "late" it may have come for the individual victim, yet has loud-

*New Orleans Med. and Surg. Journal, iii, 698–9.

†Broussais, Phleg. Chron i, 131.

ly proclaimed the nature of the secret poison just commencing its work around. How often the agonizing spasms, the rice water discharges and dread collapse have revealed the nature of the slight diarrhœas prevailing, and led to timely preventive and remedial measures. They do not come too late! As well might it be said of the accumulated labors of the anatomical school to which our reviewer evidently belongs, that the disclosures of the dead body "came too late," although the cadaver spoke "with most miraculous organ" of the malady of the living and reacting man. And do these welcome signals come too late for prognosis. Oh! no! When day after day the contest between life and death has been fiercely maintained, and friends have gathered 'round the couch of the sufferer with tearful eyes and throbbing hearts; when Science itself baffled stands mute and with averted eye before the inquiring gaze of Love and Friendship, which beseechingly implore in vain, one hopeful, cheering glance. Do they come too late? Ah! no! for then with sparkling eyes and radiant brow, she can joyfully exclaim. Be of good cheer! chase all thy fears away! the struggle is past and Life the victory hath won!

(*To be continued.*)

Letter from S. S. Satchwell, M. D.

PARIS, January 2nd, 1861.

CHARLES E. JOHNSON, M. D.—

Dear Doctor: I left for Europe, as you know, several months ago, and perhaps you are before now expecting a letter from me for publication. I am aware that, during my absence, our readers will expect to hear from me through the North Carolina Medical Journal. Since crossing the Atlantic, I have, from time to time, postponed writing, not merely because I desired before doing so, to familiarize myself to some extent with the hospitals and medical resources of Paris, but for the additional reason, that the unfortunate uncertainty which has attended, for some time past, the appearance of our Journal, rendered it doubtful in my own mind whether my article could reach the public eye before becoming old and uninteresting. But for this disagreeable irregularity, which has of late been the fate of the Journal, I should have written this communication before to-day. Now, however, as I suppose, that our administration is about commencing, I feel induced, even from this distant standpoint, to express the confident hope of more promptness on our part; and I freely pledge myself to unite my own feeble but earnest efforts, with your greater experience and superior abilities, in making our Medical Journal worthy of the confidence and patronage of the profession.

With these remarks as to my silence and my devotion to our Journal, I proceed to say, that my high anticipations as to the facilities and resources here offered for professional improvement, have been more than realized. I have already seen enough to justify me in expressing the belief that the medical advantages of Paris, are greater than those of any city in the world. Especially is this true in relation to the opportunities offered, gratuitously offered, for the study of Anatomy, Physiology, Surgery, Diagnosis, Pathology,

and the Diseases of women and children. Paris has, at no former time, been so justly entitled to this distinction as now. The unexampled prosperity of the city, the increasing number of able and eloquent men in the profession, all struggling for distinction, and the liberality of the existing government in fostering all the arts and sciences, have given a new impetus to the cause of medical progress, and multiplied the sources of medical knowledge. When I inform you that the aggregate number of beds in the various hospitals are more than twenty thousand—that over fifteen thousand cases of disease in all its forms, are here daily opened the year round to the examination of medical men who come hither for improvement—that around every patient are able men, not only willing, but anxious to give clinical instruction—that the great Parisean school of medicine is conducted on a thorough and magnificent scale, numbering twenty-six Professorships that are won by merit alone, and awarding Diplomas only to the deserving, you will admit that there is some ground for the claims of Paris to superiority in medical instruction and in medical advantages. Among so many talented men, and so much ambitious struggling for preferment, as characterize the profession here, the man who urns a position, does so, not by adventitious circumstances, but by prolonged labor and merit: and when he has received it he is apt to hold it. It is, indeed, a redeeming feature in this arbitrary government, maintained by the iron rule and resistless power of military despotism, that it is not by wealth or family influence here medical men are elevated to stations of honor and profit, but by the weight of solid acquirements and intrinsic worth. In this way Dupuytren, Velpeau, and other leading men in Paris, have risen from the lowest ranks of poverty and obscurity to the topmost rounds in the ladder of fame. And hence it is, that members of the profession who have reputation, have acquired it legitimately, and are not so dependant, as with us, upon the fluctuating appreciation of public sentiment as regards practitioners. With us,

medical men are more sensitive; medical qualifications are not so easily determined by the public; and the man with a large practice to-day may lose it to-morrow. Not so in France. Here the ordeal is more searching and just through which he must pass who secures the honors and practice of the French people. When obtained, no rude hands nor unworthy means can displace him. Whether our physicians are not more practical and successful in treating disease—whether the names of these distinguished European physicians and surgeons, of whom we have all heard and read so much, are not magnified through the mists of the Atlantic, involve questions that I will not now discuss, especially not until I know more of them. However this may be, the medical sojourner is anxious, after arriving, to see these eminent men—to hear the words, to see the faces, personal appearance and manners of men whose professional achievements and mental structures, have impressed them at home.

Here, at the time-honored Charity hospital, may yet be seen the delicate-looking and accomplished Velpeau, now nearly seventy years of age, but as industrious and as fond of operating as ever. At the Clinical hospital of the Faculty of Medicine, Paul Dubois, almost worn out, continues his favorite branch of obstetrics and diseases of women. In the same Institution, Nelaton, now the most noted surgeon of France, has daily service, and attracts a larger crowd of admiring students than any man here. He enjoys the reputation of being one of the wealthiest, as he is certainly one of the best surgeons living.

The Charity hospital, the theatre of so many former triumphs and discoveries in medical science, contains six hundred beds for medical and surgical cases, and further extensions are contemplated. The principal surgeons are Velpeau and Malgaigne, and the chief physicians, Nonat, Piorry, and Bouillaud. Malgaigne is a fine operator, and a bold and intrepid surgeon, who studies hard and exercises a great influence in the profession. He is a great critic and is sometimes exceedingly severe and cutting upon the views

and practice of other Professors and writers of Books. Nonat is a rising man here in the important branch of female diseases. He has written a very acceptable book on the subject. Those who are seeking information in uterine troubles, find him not only pleasant and kind as a man, but instructive and interesting. He makes free use of the speculum, using milder caustics or the hot iron to the neck of the womb as cases may demand. In uterine granulations, prior to other applications, I have seen him use, with marked benefit in many cases, a favorite little instrument of his own invention,the Curat. It imparts new action to unhealthy and bleeding surfaces, prepares the way for the application of other remedial agencies, and under its use I have seen patients restored in a short period, who must otherwise have lingered a long time. Piorry, so celebrated in percussion and auscultation, and Bouillaud, renowned for his investigations in rheumatism and diseases of the the heart, are opposing champions, the former holding to solidism, the latter to vitality. Piorry, using his favorite pleximeter, invented by himself, will thump for hours over the chess and abdomen of a patient, and it is interesting to see his surprising discrimination in detecting disease, and marking the nicest shades of difference in sound. Bouillaud clings, with pertinacity, to blood-letting and other dogmas of his own, and is caustic towards opponents of his theories.

The hotel Dieu is the oldest hospital here, and one of the largest. It contains about one thousand beds, and receives medical and surgical cases. Trousseau, so well known in the annals of the diseases of the respiratory organs, is the chief physician, and Jobert the principal surgeon. Both are very celebrated. Probably no physician in France has a more commanding position than Trousseau. He is thoroughly posted, has great skill in diagnosis, and lectures with eloquence and ease of comprehension by Americans. Jobert is a dexterous operator, and noted for his simple but effective method of treating fractures, as well as for his

success in treating vesico-vaginal and recto-vaginal fistulas. He rejects the method of Sims and the suggestion of Bozeman. After the parts are properly brought together, he makes an incision on each side in order to relieve tension and facilitate adhesion, and uses a sort of a tape instead of silver sutures. He treats more of these cases of fistula than any man in Paris, and is very successful. Jobert is said to have risen from the ranks, but his irritability, roughness of manners, and profanity of speech, do not render him at all conciliating. The nonchalance in which he and Becquerel and most of the medical men here place female patients upon the back, and in the presence of eager eyes of crowds of students, thoroughly expose them, and with speculum in hand make application, often of hot iron, to the womb, strikes a medical stranger from North Carolina, at least, with some surprise, however much it may comport with the vitiated taste and depraved morals of the French nation.

At the Necker Hospital, a neat and well conducted institution, Civiale, now eighty years of age, still operates with undiminished quickness and gentleness, in his favorite speciality. He opposes the treatment of stricture by any means bordering on forcible dilutation, and in this respect differs from some of the eminent surgeons here, prefering, as he does, to remove it first by his cutting instrument, and then by the use of bongies. His wonderful manipulations and success in lithotrity are well known to the surgical world. His health is failing, and it is not likely that he can linger much longer upon the stage of active service.

Near by the Necker is the celebrated hospital for children. Here are constantly over seven hundred cases of disease, and they offer a rich field for medical observation. Children are admitted from two to fifteen years of age. Gymnastics are practiced with great benefit. About four thousand patients are treated here annually. The mortality is one in forty. Among the principal physicians are Bouvier and Roger, and surgeon Guerstaut.

There are two hospitals specially devoted to syphilitic diseases, the one Midi, for males, and the other, Lourcine, for females. They are both in the full tide of successful operation, and crowded constantly with patients. Creuveilier is one of the attending surgeons. Ricord, so long the distinguished surgeon of hospital Midi, has lately retired from duty there, in consequence of a law requiring that all hospital surgeons not full Professors, must retire from hospital service at the age of sixty. He is that old, although looking younger. He has the largest practice of any man in France, and wears decorations from every monarch in Europe. A splendid banquet has been recently given to him by the Faculty on the occasion of his retirement from hospital service. His successor at the Midi is M. Cullerièr. These hospitals contain six hundred beds, and average annually six thousand patients. A city law requiring all prostitutes to be examined frequently by a medical officer, and if found free from venereal disease, to receive a license for prostitution, may reduce these loathsome affections, but surely gonorrhœa and syphilis abound here, nevertheless, to a great extent.

The Hospital St. Louis, is mostly designed for cutaneous and scrofulous diseases. It contains a thousand beds, and in all probability, presents the finest field in the world for the study of these disorders. The bathing establishment here is on a large scale, commensurate with the great importance attached to medicated and mineral baths, especially of a sulphurous nature. The itch is cured in two hours by a persevering treatment of dry fricture and sulphur baths. Gibert and Cazenave are the chief physicians and Richet the main surgeon.

The Laraboisier is a large establishmnet, and the best arranged Hospital in Paris. It is comparatively new and combines all the modern improvements for heating, ventilation, exercise, &c. It is a general hospital. The lion of this place is Chassaignac, a large hearted and original man, who is making his mark as a surgeon. He is the

inventor of the well know ecraseur based on the principle of a chain saw, and which he uses with perhaps too much fondness, not only in diseases of the anus and rectum, to which it is mainly adapted, but upon many other regions of the body where most surgeons prefer to use the knife. His use of this instrument, as well as his treatment of abscess and deep seated inflammation by "drainage," as he calls it, I may hereafter allude to more in detail.

There are numereus other Hospitals, general and special, many cliniques for special maladies, and other smaller schools of theory and practic, where lectures and experiments are constantly going on, and a large number of eminent members of the profession, whose names I have not mentioned even, for the reason that my communication is, I fear, already too long. I only seek now to present a general idea of the medical resources of this wonderful and magnificent city.

The great attention given to specialties will strike the foreigner impressively, especially if he comes from a section where the condition of society and the circumstances of the profession have not favored specialties of practice. For a small sum you can get a course of valuable instruction on the eye, with cases, and learn the use of the opthalmoscope. The cliniques of Lichel, Desmurres and other eminent oculists, are very valuable. For a moderate sum you can also receive daily lessons at the Hospitals on any branch you choose, from the assistants of the Hospital surgeons and physicians. These assistants are generally young men of talent and are well qualified, and being anxious for distinction, they carry on these private courses with great benefit to their classes. They generally teach the methods and doctrines of their masters, and afford you every opportunity for examining the patients at your leisure, and of making out diagnosis. Although the knowledge thus acquired by these private courses comes second handed, I believe it is the very best means after all

for improvement. The young men here are pressing close upon the heels of their elders and masters, and though less renowned, they are often as well informed, and are not borne down by any of the practices of old fogyism.

The opportunities for dissection and for operative surgery are unequalled. At the Practical School of Medicine, and at Clamart, a large anatomical establishment, you can dissect, almost the year round, to your heart's content, and upon cheap terms. While at the latter place and in private rooms, the very best facilities exist for performing, several times yourself and of seeing performed, every operation upon the dead body. An operator, thoroughly qualified, is constantly with you.

Although the profession here seem to take more pleasure in presenting a pathological specimen than in reporting a cure, yet no one can fail to admire their astonishing devotion to medical science. Numerous medical societies exist and meet, some of them almost daily, for the advancement of medicine and surgery. Here the medical savans assemble and discuss questions relating to anatomy, physiology, pathology, diagnosis, surgery and medical practice. In this, and other ways, every report presented, every theory advanced, every instrument invented, and every discovery made, undergoes strict examination and thorough criticism by men not more devoted to science than learned in the profession, acute in perception, and skilled in logic and debate. Thus is talent developed, error exposed, and facts accumulated, which authorize conclusions and establish principles that are of great benefit to the profession.

Yours truly,

S. S. SATCHWELL.

Syphilis of New-Born Children.

BY J. B. HUGHES, M. D., OF NEWBERN, N. C.

To whatever epoch or circumstance the orgin of Syphilis may be assigned, it has probably existed, though in modified form, since the transgression of moral laws has been attended by subsequent evil. It was not till at the close of the fifteenth century, however, that it assumed the character, with which we have now become so familiar, when it exhibited itself in continental Europe, and startled the world with the terrors of its contagion, and its fearful ravages. Much had been written on the subject, but Hunter is the author who has given the first systematic treatise, to which we usually refer for his own, and the previous ideas of its nature and treatment. He availed himself of all the information which three centuries had furnished, and made great progress in the study of the disease—gave an unmistakeable diagnosis of the indurated chancre, but arrived at the conclusion that gonorrhea and syphilis proceeded from the same virus.

It is to the French School with Ricord leading the avant garde, that we owe so much for the light which has been thrown upon this disease within the last fifty years. Ricord, whose genius would rest with nothing less than actual experiment, inaugurated syphilography, and exploded the dogma that gonorrhea and syphilis had the same origin, and established the contrary fact beyond the peradventure of a doubt. With mathematical precision he arranged the laws which govern syphilis; the domain and career of each kind of chancre, and apparently left no feature of the disease unexamined; and as far as he could carry his experiments, established his doctrine in each particular*.

*Lettres Sur la Syphilis.—Ricrod.

Inspired by the enthusiasm of their leader, some of his associates and former pupils, and especially M. Diday of Lyons have pushed their investigations still farther, and excited grave doubts in the minds of physicians in regard to Ricord's idea of the unity of syphilitic virus; as well as that of Hunter, confirmed by Ricord, of the non-contagion of the secondary manifestations of the disease. Ricord himself proved, that the soft chancre was almost local in its effects; exciting bubo, but leaving the constitution uncontaminated; while the indurated chancre was followed, as by fatality, with constitutional infection; but insisted that both chancres had their origin in the same virus. M. Diday at the head of the dual School, said on the contrary, that the soft chancre always proceeded from the soft chancre, and the indurated chancre had as invariably an indurated chancre for its source. M. Fournier has given an admirable synopsis* of the actual state of knowledge on this question, and of the result of the experimentation of MM. Buzenet and Nadau. While the advocates of the dual School seemed to be gaining ground in public belief, M. Ricord announced the new idea, that all cephalic chancres (of tongue, lips, face and scalp,)† were of the indurated kind, and consequently followed by constitutional infection. At the clinique of hôpital du Midi, where Ricord presided, the soft chancre of the body presented itself in the proportion of three to one of the indurated kind. With this preponderance in favor of the former variety, why should these cephalic chancres always be of the latter? Unquestionably, M. Ricord has said, because the virus is the same, but the cephalic region is the peculiar soil for syphilis, and its anatomical characters convert the soft into the indurated chancre. Those of the dual School on the contrary, maintained that this region, while it would

*L'Union Medicale Tome xii. Nos. 19. 22. 25. 28. 35. 135.

†In the United States, these points are almost never visited by the primary sore, but the patients who present themselves at the hospitals of Paris seem to consider no points of the body sacred from its contact.

resist the *contagion* of the soft, had a peculiar election for the indurated chancre, and that this election was not singular, but an analogy could be found in other diseases; as the Pericardium showing a great election for rheumatism, while the peritoneum enjoyed almost an immunity from it; the hands being peculiarly liable to itch, while the face, back, &c., were almost never attacked by it, though it could be forced into these regions; and so on with other diseases.

To settle the disputed points, MM. Buzenet and Nadau had the courage to attempt inoculation on a great number and variety of patients; and their experiments are peculiarly interesting, as they belonged to the opposite doctrinal schools, and lead us inevitably to the same conclusion—that the virus of syphilis is dual. The pus of a soft chancre was inoculated upon the lip, and at the same time upon the thigh of a healthy subject; in both places a soft chancre resulted, and so on to each point of the disputed territory, face, scalp and all. But in every instance the thigh was similarly inoculated, with the uniform result of the re-production of the soft chancre, thus establishing the fact that a soft chancre could exist in these points as elsewhere. As if in verification, however, of their pre-conceived ideas, while the soft chancre was known generally to heal with much greater difficulty than the indurated variety, it was found uniformly that the soft of the head healed very rapidly, while that of the thigh run the ordinary course where it was not prematurely destroyed by caustic. Farther, Ricord's idea that constitutional syphilis was like variola, in the fact of one attack freeing its victims from a repetition of it, has been strengthened by their experiments. Patients who were suffering from constitutional syphilis from indurated chancre, were inoculated with pus from a similar chancre, and the result was uniformly negative. The same individuals were inoculated with the pus of soft chancre, with the invariable reproduction of soft chancre, which ran the ordinary course, without aggrava-

ting the constitutional malady. The followers of the dual school, then offer as their solution of the experiments, that the cephalic region enjoys a peculiar immunity from the virus of soft chancre; and that while a soft chancre will uniformly follow the *inoculation* of pus from a similar source, this region will resist the virus, so far as *contagion* is concerned. The experiments would seem to justify this conclusion, and when we have it more firmly established by additional investigations, its announcement will excite no more surprise than we now feel when gravely told that syphilis and gonorrhœa have not the same origin.

I have thought it necessary to introduce this exposé of the disputed points in syphilis, which have been fully discussed in the French Medical Journals, as they affect to a great extent, the transmission of syphilis by inheritance—the soft chancre not being transmissible, while the constitutional affection resulting from indurated chancre is almost invariably so conveyed. And also, that while much is known in regard to the syphilis of new-born children, it will require some enthusiast with courage and hardihood to make actual experiments to decide other points now in dispute. The following cases of syphilis in new-born children have, within the past three years, come under the care of my father, Dr. I. W. Hughes, and myself.

Case No. 1. June 11th, 1858. Bright mulatto child, girl, four months old. The history given of it was, that it was born at term, of full size, apparently healthy, nursed well, and gave no indication of disease till it was two months old, when its nose and mouth became sore, an eruption showed itself on its body, and it began to lose flesh. When presented to us, it was greatly emaciated, breathed with difficulty through its nose; its lips, mouth and nose filled with condylomata (mucous papules); on its forehead and scalp was an erythema of copperish color, while on the scalp there were also several ulcers. Condylomata were in the vagina, and associated with an ugly ulcer at anal orifice. The string of lymphatics along the inner border of

the thighs was a series of abscesses. The hands and feet bore the characteristic erythema, and several pustules; while the buttock was filled with pustules and tubercles, the spaces intervening between the eruptions being of copperish brown color. The lymphatics at the back of the neck and behind the ears were hard and swollen. Our inquiries elicited no information of venereal taint from the mother, but the child was put upon anti-syphilitic treatment with the happiest results. ℞—Hydrarg. Protiod. grs. ii to be divided into 24 powders, one to be given each morning. August 1st.—Child greatly improved—the abscesses along the thighs had been opened from day to day as necessity required, some of them had healed entirely, and those which had at first degenerated into ulcers, assumed a healthy appearance with diminished discharge. The erythematous eruption which had, in a great measure disappeared, left in many places a border of thin whitish scales. A slight iritis which had supervened soon after treatment was commenced, giving great annoyance to the child, at this time was entirely relieved. The Hydrarg. Protiod, which had purged a little, was modified by the addition of a small quantity of opium, and continued as before; a solution of Nitrat. Argent. gr. i. to Aqua f ʒ i. was applied to the ulcers. Nov. 1st.—All signs of eruption disappeared, the enlarged lymphatics were reduced to nearly their normal size, flesh increasing, skin clear and healthy, and the ulcer at anal orifice, and one on the scalp were all that remained of the disease. Same treatment continued. Dec. 1st.—Child perfectly cured, and is at this time three years old, vigorous, intelligent, and in the enjoyment of perfect health, having never since exhibited any symptoms of the disease. As a necessary explanation to this case, I must mention that, although the father of the child did not come under our care, I saw him and he was suffering from constitutional syphilis in the fullest sense of the phrase.

Case No. 2. Oct. 1859.—Negro child, boy, three months old. Born at term, with all the indications of health. At

the sixth week, its mouth became sore, diarrhea set in, lost flesh, and an eruption showed itself, which had been treated by its mother without effect. When presented to us, its nose and mouth were filled with the condylomata; on its legs, feet and arms was an erythema, associated with pustules in the accustomed crescentic order. The aspect of the child was pinched and wearied, and its scalp bore a papular eruption of copperish color. We could get no fact from the mother in regard to syphilitic infection. Prescribed for child, Hydrarg. Protiod. grs. ii. to be divided into 24 powders, one to be given each morning. In four weeks every symptom of syphilis had disappeared; it regained flesh and was perfectly cured. It has not since had any return of the disease in any form, and is a fine, healthy child.

Case No. 3. August, 1860.—Negro child, girl, two months old. Born at term, with somewhat pinched and aged features, but otherwise exhibiting no evidence of disease. At its fourth week the inner border of legs and soles of the feet showed a pustular eruption. When seen by us, all the natural orifices, nose, mouth, anus, &c., were covered with condylomata, with the lymphatics of the neck, and behind the ears hard and swollen; its face bore patches of erythema mixed with pustules, which had in some places broken, and been converted into ulcers; its scalp was foul with scabs. The parents of this child had been under our care in July, 1858, for gonorrhea, associated with indurated chancre. In September, the expected secondary symptoms exhibited themselves, which were apparently entirely relieved in May, 1859.

Some months afterwards, the mother became pregnant, and in July, 1860, was delivered of the child above described. The child was put upon the same treatment as the previous cases, but gave us no symptom of decided improvement for two weeks. In this space of time, the disease had reappeared upon the mother. Her occupations had prevented her realizing the necessity of taking medicine anterior to the eruption. She was now given iodide

of potash, grs. v. three times a day, and the mercury continued with the child. Both mother and child soon began to improve, and in November, there was no vestige of the disease in either, and it has not since reappeared. The child is healthy and growing rapidly.

Case No. 4. June, 1860. I was called accidentally to see patient, Mulatto child, girl, eight months old. Had been sick ever since it was two months old, when it began to lose flesh, and an eruption commenced to spread itself over the body. When seen, it was in the last stage of syphilitic marasm. On its face and scalp was an erythematous eruption with pustules and ulcers. The glands of neck and behind the ears were swollen; its body and limbs well marked with papules and pustules which assumed more or less the crescentic form. The inguinal glands had degenerated into foul ulcers; its body wasted almost to a skeleton. The liver was much swollen, and alternate diarrhea and constipation had prevailed: its life was nearly worn out. Prescribed Liq. Ammon. Acet. in doses of ten drops every two hours. Hyd. C. Mite, Pulv. Doveri, *aa.* grs. iv. to be made into twelve powders, one to be taken morning, noon and night. The child died two days afterwards—could learn nothing of the history of the case, so far as related to syphilis of parents.

Case No. 5. December, 1860.—Negro child, girl, seven months old. Had been born healthy and continued to thrive till its third month, when its skin assumed a dryish scaly appearance without characteristic eruption, and it lost flesh rapidly. When seen by us, the skin presented this dryish scaly appearance very forcibly, and the expression of face was like that of an old person, with muscles of the body greatly wasted; its bowels sometimes irritable, but generally regular, the appetite generally good, the lymphatics of neck and groin, and the tonsils were swollen.

The symptoms presented gave no such unmistakeable evidence of syphilis, as the history of the mother. She had borne three children previously by the same husband. Neith-

er he nor she confessed to a syphilitic taint. Each of the previous children had between the fourth and tenth weeks, broken out with an eruption of nose, mouth and anus, and the limbs had become filled with erythema and pustules. The first child had had large abscesses in the groin, and though each succeeding child had manifested less of the disease, it was the same in all. Each child had wasted and died before it was six months old. The child presented to us, was placed upon the same mercurial treatment as the cases mentioned above.

January 1861.—While the child seemed to be improving, it at this time had an attack of measles, which greatly taxed its strength, but left no bad symptom behind it. As soon as it was better, the mercurial treatment was resumed; and at this writing though the child is not entirely cured, it bears nearly the aspect of health—its skin has become clear—appetite good—swollen glands disappearing—flesh increasing and strength restored. The treatment is still continued, but will not be much longer necessary.

Case No. 6. March 1st, 1861.—Negro child, boy, three months old. Born at term, good size and healthy. He presented the following symptoms—a papular-squamous eruption which had commenced when it was five weeks old, existed on its scalp; at the inner border of limbs, and flexures of joints were occasional patches of erythema which had given place in some points to thin whitish scales; on the face and eyelids were pustules, and the scrotum and anus were filled with condylomata, and at the anal orifice an ulcer. The buttock was a mass of tubercles and pustules, some of which had degenerated into ulcers. Every inquiry in regard to syphilis was denied by parents; but a few days before I saw the child, the mother came to me for a sorethroat which was palpably syphilitic, both nipples were sore and fissured, and one of them had several mucous papules. She told me that the throat had become sore one week after the birth of infant—then, the nipples in a few days afterwards. Soon, the mouth of the child was likewise affected, and then followed

the general eruption of the body. The mother was given iodide of Potash, grs. v. three times a day, but no medicine was given to the child, letting it receive its cure through the milk. This treatment is still pursued, and I saw both of the patients yesterday. They are already nearly well. The throat of the mother gives her but little trouble, and the eruption of the child is greatly improved, having disappeared entirely from some parts of the body, and rapidly healing in the rest.

The history of these cases illustrates the great difficulty in deciding many doctrinal points in syphilis of new-born children. The parents in some instances, from ignorance or carelessness in noticing the primary sore, in others, from an unwillingness to acknowledge any improper conduct, deny every inquiry which would enlighten us in the ways of diagnosis; and if any confession is made, it is rather through accident, or ignorance of the direction to which our questions tend.

The cases presented for treatment constitute but a small proportion of those which have been infected, for a syphilitic mother may, and generally does abort a great many times, and at various periods of pregnancy, before a child is delivered at term. Observers have detected external manifestations of the disease as early as the second month of intra-uterine life, and there are many observations of this manifestation at the fifth and sixth months. This is a feature of the force of the disease, when it seems to exhibit itself with such violence as to prevent the fœtus from arriving at term, while in the cases reported in this article, which agree with other observations, the disease does not exhibit itself till the third, fourth, and up to the tenth week of extra-uterine life. We may then say of syphilitic children born at or near term, first, that some present a pinched cachectic look, which ought to excite suspicion of the disease at time of birth; that this cachexiâ may constitute the only prominent feature; while from mal-assimilation of nutritive matter the muscles waste, the skin becomes dry, and the

child may die with or without any cutaneous eruption; or if subjected to treatment may recover without the disease ever having manifested itself externally. Second, that the majority of cases presented, are reported to have nursed and looked well till the first or second month, when appetite may or may not begin to fail, child grow feeble and emaciated, and eruption show itself.

The skin and mucous membranes are generally the surfaces which give the first indication of constitutional infection in the child, as well as in the adult. There is no variety of eruption which they do not assume under this influence, and there may be several varieties mingled together; in fact, this is rather the prevailing rule of the disease; one subject often exhibiting vesicles, papules, &c., at the same time. The cases seen by us have generally exhibited on face and limbs, the erythema associated with pustules; on the scalp, pustules, scales and scabs; at nose, mouth, vagina, anus and scrotum, the condylomata; while on buttock, the pustules and tubercles have prevailed. This has been the most frequent association which we have observed, though of course there can be no precise limit affixed to any peculiar eruption when the whole surface is liable to assume either one or all of the eruptive diseases at the same time. The mucous membranes from their functions, being almost constantly moist, rarely show scales and scabs, but generally vesicles, pustules and ulcers. It is rare to observe diseases of the bones in new-born children suffering with syphilis, though they may exist. It is generally in later years that these and rheumatism show themselves. With treatment, these cases rapidly improve; without it, the disease becomes aggravated and generally leads to a fatal issue; though in some instances where the force of the disease has been enfeebled, and there is outside of the syphilitic taint, great natural vigor of constitution, the subject may live many years, being liable to rheumatism, and the repeated manifestations of the disease under sickness from dissipation, or reduced circumstances of living.

With regard to the period at which eruptions show themselves, we must say that pemphigus both in this particular and in result makes a class of cases for itself. Sometimes at birth, generally a few days after, it manifests itself, and other things being equal, the victims of it die very rapidly. M. Bouchut* has quoted the investigations of MM. Paul Dubois, Deville and others in their autopsies of syphilitic children, which have been made from the fœtus of four months up to child delivered at term. The thymus gland, the lungs, brain and liver have exhibited together or separately in each case, peculiar changes. In the first stage, there were mere points of congestion of a fibro-plastic character; further on, these had degenerated into abscesses. The thymus gland, especially, and more uniformly has exhibited these changes. In the lungs, M. Dubois has found many abscesses, but in one case to which special value has been attached—a child delivered at term and filled with pemphigus—the lungs were found without abscesses, but had disseminated all through them patches of eruption which corresponded to that manifested externally.

The question which now presents itself is, what is the source of syphilis in new-born children? M. Ricord says, "There cannot be constitutional syphilis without a chancre or syphilitic mother or father." The first part of the proposition that a secondary sore is not contagious, as it will affect another branch of our subject, we will leave for the present, to revert to it farther on. The second part means, that syphilis is transmissible by inheritance, and I suppose there are few persons at the present day to contradict the fact. But the mother and father seem to possess different powers in this agency. In order to transmit syphilis to offspring, it is necessary that one or both parents should be suffering from *constitutional* syphilis, the primary sore not sufficing to cause such a result.

In regard to the father, it appears that when suffering

*Maladies des Nouveaux—Nés.

from constitutional syphilis, the ovum is infected by him at the moment of conception, and though the fœtus may be delivered at term, and not exhibit the disease for six or eight weeks after birth, it has really from the very first moment been diseased. If syphilis is contracted by father after conception, if the mother does not become affected the disease is harmless so far as the offspring is concerned. But a child "created syphilitic by the father can infect the mother during gestation." The force of the disease is here brought in question, as to the relative power of father affecting the offspring. Erichsen, in his Surgery relates a case of his own, where a gentleman suffering from constitutional syphilis, married and had a large family, none of whom exhibited any symptom of the disease. But this case is exceptional, and although we may believe that the father bears less danger of infecting offspring than the mother, still when he is suffering from constitutional syphilis the result will be, as a rule, that his children will come into the world syphilitic. In regard to mother, Ricord says that "inheritance by mother can proceed from a constitutional syphilis anterior to conception, or consecutive to an indurated chancre contracted during gestation." Thus the danger from mother extends during the entire period of pregnancy, except, perhaps, as M. Bouchut has expressed a doubt towards the eighth or ninth month. The only thing requisite is constitutional infection, for the mother to affect infants; and we may now ask, is a constitutional syphilitic mother who is carrying a syphilitic fœtus apt to infect husband? The mass of evidence is against the supposition, and M. Bouchut relates a case, where a woman who had been under his care for indurated chancre, married in a few months against his advice. She conceived, and a syphilitic child was born at its sixth month, but the husband did not contract the disease.

Here arises the important question of the power of contagion of secondary syphilis. M. Ricord has asserted that it is not contagious; but that in those cases where this has

appeared to be the fact, there has been error in diagnosis, and that what appeared to be a secondary manifestation was really an indurated chancre transformed "in situ," into an ecthymatous pustule or mucous papule. Melchior Robert, whose treatise* is drawn from the lessons of Ricord says in relation to this point; "It did not suffice to attribute to every primitive chancre the property of infecting the economy; it was necessary still to multiply the propagating means of syphilis in extending this power to secondary accidents. The bodies of unfortunate patients have been sown to profusion with the secretion of every variety of syphilides; they have inoculated one patient from another, from patient to healthy individuals; sometimes from mucous papule, sometimes from ecthyma; again from tertiary manifestations, and finally from the blood of syphilities; and all that to arrive at the means of contradicting an opinion, which experimentation has a thousand times confirmed." There could be no more positive assertion than this, and yet, in 1857, M. Ricord, in his Oral lectures, expressed a doubt of this very point. The frequency of reports of syphilitic child infecting healthy nurse, and vice versa, and the medico-legal importance of the question have created much opposition to the belief of the non-contagion of the disease in this form. Without contradicting the theory entirely, it is certain that some modification of it is necessary; for a healthy mother carrying a fœtus infected with disease by the father, which has it in secondary form, is in her turn affected, and perhaps in an exaggerated degree, sometimes exhibiting it anterior, but generally consecutive to accouchment. The question of mother and child infecting each other when only secondary manifestations have existed, have been the principal obstacle to assent to this maxim of Ricord, for the great majority of adults with constitutional syphilis have failed to communicate it by contact.

Can a syphilitic child infect a healthy nurse? The prob-

*Maladies Vénériennes.

ability is that it can; but to do so, it is necessary that the disease shall be developed into eruption. M. Bouchut relates the case of an infant suffering in this way, who communicated the disease to three nurses consecutively, neither of whom had ever given any evidence of the disease anteriorly; of another nurse, who had a healthy child of her own, but contracting syphilis from a child which she was nursing, actually communicated it to her own child.

The means of transmission is generally thus: the child has mucous papules or ulcers on the lips, in frequent contact with the nipple of the nurse; soon upon it a similar eruption or it may be a fissure is developed, and then follows constitutional infection. And in some instances, the nipple is actually lost by the amount of fissure which surrounds it. Can a syphilitic nurse impart the disease to a healthy child? M. Ricord has denied this communication from nurse to child, except when the former is suffering from primary syphilis, and she by accident inoculates the nursling with the pus from primary sore, when secondary symptoms follow as a natural consequence. M. Bouchut while citing some cases to the contrary of this doctrine, is inclined to adopt somewhat the same views especially so far as infection through the milk is concerned. In the different analyses* of the milk, it is pronounced "a perfect aliment elaborated from the blood;" and while the different ingesta, excitement from rage, venereal desire, the menstrual flow, &c., &c., may affect its character in the proportion of fat globules, salts, &c., to a limited extent and thereby affect the nursling; yet there is no consistent deviation from the average standard from these causes. So in persons with phthisis, scrofula, syphilis, cancer, rickets, &c., the milk shows no consistent change so far as chemical test will detect. Yet no one will rationally doubt, that the milk elaborated from the blood of such persons, which nourishes the blood, muscles, bones, &c., of nurslings must in some wise differ from that of perfectly

*Carpenter's Physiology.

healthy persons. No one would knowingly engage a nurse for their child who had syphilis, scrofula, &c., because her milk exhibited by chemical test no derangement. In regard to syphilis, we see that in the father the spermatic fluid is so contaminated that it infects the ovum at the very moment of conception, and also, that a mother contracting syphilis after the child is conceived in health will infect it through the placental circulation. And why can not the milk of a syphilitic nurse, whose every secretion is affected by her syphilitic blood, convey the disease to a child which is nourished by it? There may be such vigor of constitution in some cases as to resist it, but in the great majority of cases the infant must suffer. We ourselves know a gentleman, born of healthy parents, all of whose brothers were healthy; but he was "put to nurse" to a woman who was afterwards discovered to be syphilitic, and he has all of his life suffered from rheumatism, and occasional syphilitic eruption, which would disappear under good health, but manifested itself again when attacked by any acute disease.

That the milk should give no evidence of the particular malady, ought to excite no surprise when we reflect that the syphilitic pus differs so little from healthy pus, that we have no certain means of distinguishing them, but by inoculation; and farther, that in the majority of cases where the mother is put under treatment, and the milk is freighted with the remedy for diseased child, chemical test will rarely detect any change in it. We have thus far considered syphilis in its secondary form, and it will be necessary now to examine its influence when passed into the tertiary. In this stage, the sub-cutaneous sub-mucous, fibro-osseous and muscular tissues, the testicle, liver, &c., have been invaded; that is, the poison has passed from the external to the deeper parts and taken firmer hold of the victim. Has its power of transmission increased with its progress? No. M. Ricord has said, that the disease passed into the tertiary stage is not transmissible by inheritance, but whatever manifestation may be made in a child born under such influence

will be scrofulous. M. Deville has observed that children born of fathers suffering from tertiary syphilis did not exhibit the disease, and while he believes the same in regard to mothers under similar circumstances, his observations have not been so satisfactory as to allow him to assert positive belief. The *force* of the disease is again brought in question here, and it must be confessed that grave doubts exist of the truthfulness of these observations. There is no doubt that secondary syphilis and scrofula are somewhat analogous in their manner of manifestation, and it is often extremely difficult to distinguish one from the other; but their nature is so different, that it will require yet much stronger proof to convince us, that though scrofulous parents do not give birth to syphilitic children, yet parents in the tertiary stage of syphilis will bring into the world scrofulous children. This question is important in a therapeutical point of view, for a remedy which is of great benefit in a case of syphilis may be positively detrimental in one of scrofula.

With regard to the treatment, it has become an established fact, that however much the non-mercurial school may cavil about the use of mercury in this disease in the adult, it is at least, a specific in syphilis of new-born children. The iodide is the best preparation of mercury, and may be given to infants in doses from twelfth to twentieth of a grain once a day; if no benefit is derived in the course of the day, the dose may be repeated twice a day. If administered to mother, it is best to begin with one grain to be increased if necessary to three grains per diem, this will affect the mother, and through the milk, the child. Mercury may also be used by inunction. Where it is not desirable to give mercury, the iodide of potash may be used in doses of five grains three times a day. If the disease is taken in time, when the child is not worn out, the prognosis is always favorable, but when it is in an advanced stage of marasm, its exhaustion and not the disease is the first point to combat. If this can be overcome, the syphilis will be manageable.

Whiskey as a Prophylactic in Typhoid Fever.

BY HUGH KELLEY, M. D., OF IRDELL COUNTY, N. C.

The above announcement may excite surprise, incredulity or disgust in some; but all should, however, suspend their judgement until they have had an opportunity to test it fully. I by no means advocate the regular or even the occasional use of ardent spirits as a beverage by persons in health, for I hold that spirituous liquors are in their proper sphere only, when used and prescribed as medicines. Consequently, persons in health should not indulge, for by so doing, hey tax their systems beyond what they have a right to do. Very frequently the stomach, lungs and kidneys are over worked to dispose of what is not at all congenial to health, and particularly to the natural functions of those organs. What a very short period elapses betwixt the reception into the stomach of a portion of spirits, and efforts for relief through the lungs and kidneys, rendering it very evident that it is an intruder, all the energies of the system being called upon to dispose of this unwelcome stranger.

In the spring and summer of 1847, there was a great deal of typhoid fever in the neighborhood of Gold Hill (then a village containing a population of some eight or nine hundred inhabitants, white and black.) The fever made its appearance in the latter part of April, was of a very grave type, and was quite fatal among the blacks. The appointment of a nurse was almost equal to passing sentence of death on the one so appointed. Some four or five of them died. The whites suffered very much also, and a number of fatal cases occurred. In one instance, where some sixty or more negroes were employed by Barnhart Manney & Co., the number of sick was between thirty-five and forty; and, in fact, all seemed to be dispirited and languid.

Nurse after nurse dying, I feared that all might in a very short time be confined to bed, whites as well as blacks. A short time previous to this, I had read the history of of typhoid fever in an Irish Hospital, that had continued for some time, proving very fatal to nurses and physicians, and making it difficult to get those who were willing to take the places made vacant by disease. Only two or three nurses of the orignal corps were left, and not one physician. One of the newly appointed doctors, enquired of those nurses how they managed to keep clear of the fever, their answer was that they took their whiskey three times a day, and plenty of it; hence they did not fear the fever at all. The physician acting upon this hint had all the nurses and doctors belonging to the house to commence the use of whiskey, and he reported that from that time no new case occured in the house. Finding myself to be similary situated, I ultimately prevailed upon the company (all being temperance men) to try whiskey, by giving from half gill to a gill three times a day for an adult, and to children in proportion. I was much gratified at the happy change effected. From the day they began to give the hands, both white and black, their allowance of whiskey, not a single new case occurred, and the fever subsided in some two or three weeks, and all were up again.

I was so much pleased with this result, that I determined to try it further, and did adopt it in all the families to which I was called, where they had fever of this type, from this time, July 47, up to the time of my removal, December 54. In not one single instance did a new case occur, during that period, after the family (I mean those that were able to be up,) had commenced the use of this remedy. Since my residence in Iredell, I have pursued this same course and with the same success. Some persons in this section of country would not make a trial of this preventative, and all or nearly all of their families were sufferers. A trial was made in this neighborhood last summer, which resulted as all the rest had done. Col. A. has a

large number of negroes who had the fever among them in June last. It was of a malignant type, and after some three or four deaths, he procured a barrel of whiskey and commenced giving it as heretofore directed. The result was that not another case occurred on his farm. Its modus operandi in preventing this fever, I leave for others to examine; that it is a preventative, I am fully satisfied from an experience of thirteen years. When called to attend on cases of this fever, I advise all the family that are on foot to use this preventative, and to continue its use for sometime, at least until the sick are out and able to take exercise; or for two weeks at least after the fever subsides in the family. In many intances where several members of the same family were attacked at or about the same time, I have seen the remaining members of the household adopt this prophylactic, and continue to watch and nurse for several weeks in succession without one of them taking fever, which fully sustains the opinion formed of this agent. I suggest to all who nurse typhoid cases to use this medicine, as constant exposure to the fever, but for a very few days, may bring on an attack. That typhoid fever is contagious to a certain extent I presume none will doubt.

The Abuse of Obstetrical Instruments.

"The cacoethes operandi prevails too much in this country. It must be owned that this medlesome midwifery has the tendency to throw our noble art into discred it, and to give a semblance of truth to those pungent satires so often uttered against the profession. Moreover, the éclat consequent upon any operation is generally so great among the crowd, that he who saves most limbs is apt to be considered vastly inferior to him, who armed with catling and bistoury, literally carves his name on the temple of fame. Parva leves capiunt animos. The young, the inexperienced, the weakminded, behold, then, in a constant employment of instruments, a royal road to fame and success. Eager to seize upon any weapon in the brandishing of which they may attain the desired objects, the forceps unfortunately affords them full scope; and their victims, belonging to that sex upon which novelty and presumption seem always to exert a peculiar fascination, crowd around them ready to be sacrificed."

We commend the careful consideration of the foregoing extract from Keating's Ramsbotham, to those physicians who allow themselves to be seduced from the paths of morality and humanity, by the false reputation to be temporarily acquired by the unnecessary use of obstetrical instruments. We would warn them that the glittering exterior of dishonorable success, so often reflecting the images of proud triumph to the eyes of the multitude, will be found a mere tinsel-cover to self-reproach and conscious degradation. STUDENT.

SELECTIONS.

Practice of Medicine.

Clinical Lectures.

DELIVERED IN THE N. O. CHARITY HOSPITAL.

BY AUSTIN FLINT, M. D.,

Prof. of Clinical Medicine and Medical Pathology, in the N. O. School of Medicine.

LECTURE V.—PNEUMONIA.

Augmented weight of Solidified Lung in Pneumonia—Circumstances distinguishing this from other inflammations—Treatment of the disease when it extends over an entire lung.

GENTLEMEN:—I need not offer an apology for the subject of this lecture, although I have already treated of pneumonia fully in my didactic course at the college, and have considered, on several occasions, both in this place and in my remarks at the bedside, various points relating to the morbid anatomy, the clinical history, and the treatment of this disease. No apology is needed for recurring to this subject, for pneumonia is a disease important everywhere, but important especially to the medical practitioners of the South, in consequence of its far greater prevalence, and its prevalence in a severer form here than in the Northern States. Of the many practitioners who visit New Orleans during the winter, nearly all are interested in observations and discussions connected with pneumonia, more than in those pertaining to any other disease, and I am often asked to multiply my lectures on this subject.

Moreover, the subject of pneumonia is of interest, because,

by a kind of tacit agreement, this disease has come to be considered as a type of inflammatory affections generally; and the principles of therapeutics which are applied to this disease are considered as applicable to acute inflammation wherever situated. To a certain extent, this is undoubtedly correct; yet pneumonia presents some striking points of difference when compared with other inflammations. The inflammation is seated in a structure which is not a serous membrane, but which lacks the usual anatomical characters of a mucous structure; I refer, of course, to the membrane lining the air vesicles and the ultimate bronchial tubes. The inflammatory process here involves a solid exudation, which is probably derived from the blood coming from the right side of the heart, before becoming oxygenated, or, at least, at the instant of oxygenation. This peculiarity cannot possibly obtain in any other situation than in the air-vesicles and ultimate bronchial tubes. The exudation here never becomes organized, if it does elsewhere, as is generally supposed it may when it takes place on a serous surface. It is rarely converted into pus in this situation, if this conversion be possible elsewhere, as is generally supposed. The exudation does not remain as the tuberculous exudation does, in the same situation, but it is reabsorbed, often with great rapidity. Adhesion and obliteration of the cavities do not follow as in the case of serous membranes, but after the absorption of the exudation is completed, the pulmonary structure is intact, having received no appreciable damage. These are circumstances which are interesting, to say the least, in a pathological point of view.

During the present winter I have been interested in determining the increased weight of lung solidified by pneumonia. I have on the table before me the lungs from the body of a patient who died in a ward not under my charge, but the patient was seen by me before death, and the diseased organs have been kindly placed at my disposal. Over the entire right lung were presented the physical signs of solidification

prior to death, and you see that it is perfectly solid. The affected lung is dilated apparently to the utmost limit of its expansibility, by the solidifying exudation. When I blow into the trachea with a pair of bellows, it remains motionless, while the left lung, which is free from disease and collapsed, expands readily. Separating these lungs from their connexion with the heart, and weighing them separately, I find that the solidified lung weighs *sixty-six ounces* more than its fellow. Now, the weight of the right lung, in health, is somewhat greater than the left lung, but here is an enormous difference. The right lung has acquired a weight above that of health amounting to nearly or quite four pounds averdupois! To what is this enormous increase of weight due? Not to the presence of blood, for there is less blood in the diseased than in the healthy lung. It must be due to the quantity of solidifying exudation. Nearly or quite four pounds of the solid constituents of the blood, then, were withdrawn from the circulating blood in giving rise to the solidification in this case. I have weighed the lungs in other cases with similar results, and proportionately, where, instead of an entire lung, a single lobe only was affected by inflammation.

This increase of weight of lung affected with pneumonia, is a striking fact and highly suggestive. Is the withdrawal of this amount of the solid constituents of the blood of no moment, so far as concerns the condition of the blood, the functions of the body, and the state of the vital forces? Can the blood sustain such a loss without any dangerous consequence resulting from it? We know that it is not necessarily fatal, because patients not unfrequently recover; but is not this a source of evil and danger which is to be considered in practice? Do we not find in this striking fact an explanation, in part, at least, of another fact, viz: patients with pneumonia affecting the whole of a lung do not generally die by apnœa, but by asthenia? The function of the affected lung is, of course, suppressed, while the solidification continues, but the function of the other lung

is amply sufficient for the continuance of life. Patients do not necessarily experience even embarrassment of respiration from the solidification of an entire lung, but the pulse is apt to become frequent and full, the powers of life fail, and death ensues from exhaustion.

The history of the case which furnished this specimen was an illustration of the statement just made. Under a moderate use of opium, together with alcoholic stimulants, the respirations did not exceed sixteen per minute. There was no lividity of the face or prolabia. The pulse, however, was frequent and small, the patient was greatly prostrated, and despite the free use of stimulants and a sustaining diet, he sank more and more, and died from exhaustion.

The augmented weight of the lung in pneumonia is suggestive in another point of view. Notwithstanding the great amount of coagulated matter withdrawn from the blood, the coagulable constituent of the blood, viz: fibrine, does not appear to be diminished, but, on the contrary, increased. If blood be drawn during the progress of pneumonia, the amount of fibrine is found to be greater than in health; in fact, in this inflammation especially is the fibrinous element in excess. Does not this go to favor the hypothesis that the fibrine in the blood is excrementitious rather than the material for nutrition? And is not the greatly augmented quantity of the fibrine to be considered as expressing the waste of the tissues in this disease? This question is not without significance in relation to the modus operandi of certain remedies which clinical experience shows to be highly useful in the treatment of pneumonia.

There is no lack of opportunity, gentlemen, in this hospital, to observe cases of pneumonia in which the solidification extends over an entire lung. Examples are more numerous here than at the North, as I have shown by a comparative analysis of cases recorded in this hospital and at the hospital* in Buffalo. This fact explains, in part, the

*Vide Am. Jour. of Med. Sciences, Jan., 1861.

greater severity of the disease here, and the larger mortality from it. I have at this moment in my wards a patient who is just convalescing from pneumonia which has extended over the whole of the right lung, another patient who is nearly ready to be discharged, and another who is passing through the disease. Now, in these three cases the principles of treatment have been essentially the same. Many of you have observed these cases with me day after day, and have listened to the remarks which were suggested at the bedside. Let me state in a few words the principles of treatment which these cases have illustrated.

In none of these cases had the inflammation extended over the entire lung when the patient was admitted. It became thus diffused while the cases were under observation. Could this diffusion have been prevented by any plan of treatment? I am sorry not to be able to answer this question affirmatively. I have witnessed extension of the inflammation in cases in which different measures of treatment have been employed—such as bleeding, mercurialization, and the free use of antimony; and I am obliged to say I do not believe that we have adequate evidence of the effectiveness of any particular measure or measures in restraining the inflammation within the limits of a single lobe.

Blood-letting was not practised in either of these cases. But observe, gentlemen, I do not take ground against the employment of blood-letting in any case of pneumonia. I believe this to be an extreme and injudicious view; but I do believe that in the great majority of cases, even when the disease is observed from the commencement, blood-letting is not called for, either because it is contra-indicated, or the objects to be attained by it can be secured by measures less open to objections, viz: by cardiac sedatives and saline laxatives. In the cases to which I am referring, even these succedanea of blood-letting did not seem to me to be called for. The disease had existed in all some days

before admission, and the solidification had extended at least over an entire lobe.

Taking into view the history, the habits of the patients, the extent of lung affected, and the symptoms, the two following objects appeared to comprehend all that could be done to give the patients the best chance of recovery:

1. To place the patients under the influence of opium sufficiently to tranquilize the system—to render it, as it were, as tolerant as possible of the local affection, and to promote sleep. The objects embraced under this head are very important. When it is recollected that the disease kills by asthenia, all that we can do to obviate disorder, fatigue, and exhaustion, will be likely to increase the probability of recovery. Hence the value of opium in this, as in many other diseases. However we may explain the modus operandi of this drug, clinical experience shows its great value in the treatment of pneumonia. And it is to be borne in mind that in this, as in many other diseases, the system bears, without any narcotic effect, large doses of opium. These patients took, for several successive days, from nine to twelve grains of opium per day, without the least approach to narcotism. The good effects of this remedy must have been apparent to you in the diminished frequency of the pulse and respirations, the freedom from pain, the refreshing sleep which it procured, even while the local affection was advancing. I may repeat here, that it would be no objection to the use of opium, if it diminished expectoration in this disease, which it does not. The exudation in pneumonia does not go off by expectoration, but by absorption. One of the members of the class is now recovering from a recent attack of pneumonia affecting the whole of the right lung, and the resolution has gone on with astonishing rapidity; yet, in this case, during the whole course of the disease, there has been absolutely no cough and expectoration. The expectoration which usually occurs during the resolution of pneumonia, does not consist of the exudation into the cells, but mainly of mucus from the bronchial tubes.

I have offered reasons for the utility of opium; but you will bear in mind that its applicability in the treatment of the disease does not rest on the plausibility of these or any other reasons which may be given with a view to explain its utility, but on the conclusions drawn from repeated observations of its effect. It occurs to me to suggest, in connexion with the remarks which have been made respecting the probable derivation of the excess of fibrine from the waste of the tissues, whether opium may not be useful by limiting this waste; and, if so, may it not tend to limit the amount of exudation, and in this way, in fact, limit the extension of the disease? I throw out this idea simply as a casual suggestion.

2. The second object was to support the system by alcoholic stimulants and concentrated nourishment. These measures constitute the sustaining course of treatment of which I have spoken often in connexion with various diseases. The patients got an ounce of brandy at intervals varying from two to six hours during the progress of the disease, after the commencement of resolution; then the quantity was gradually diminished, and it was discontinued when convalescence was fully declared. Essence of beef and milk, alternately, at short intervals, constituted the diet.

Not many years ago, these measures, during the continuance of an acute inflammation, would have been deemed extremely hazardous. The utility of the sustaining treatment in pneumonia, and many other affections, has become so familiar to me that I have ceased to regard it as possessing any novelty; but from the frequent expressions of surprise and doubt by practitioners who do me the honor to visit my wards, I am reminded that it is a novel treatment to many, and that all do not find it easy to shake off notions which have become firmly fixed. I shall not now dilate on the subject. You have had abundant opportunity to observe for yourselves in the cases of which I am now speaking, and in numerous other cases, not only the innocuousness, but the apparent efficiency of the free use of alcoholic

stimulants and nutriment in certain cases of pneumonia, as well as of various acute affections. The safety and utility of these measures must, of course, rest on experience; but we need not be at a loss to understand, in some measure, why they are not only safe but useful. We have seen that in cases of pneumonia, in which an entire lung is solidified, sixty ounces of solid matter are withdrawn from the blood, and that the danger to life is from asthenia, or exhaustion. Hence, it is the great object in such cases to support the powers of life, and this is to be done by alcoholic stimulants and nourishment.

There is another consideration which has an important bearing on this point in the treatment. Pneumonia, in general, does not involve destructive lesions of the lung, even when it proves fatal. The lung structure is intact. The cells are filled with exudation matter which will almost surely be absorbed if life be sufficiently prolonged. A grand object of treatment, therefore, is to prolong life until resolution begins and progresses so far that, if serious complications do not ensue, the patient is safe.

In these remarks, gentlemen, I have had reference to cases in which pneumonia extends over an entire lung. This diffusion of the disease, as you well know, renders the affection one of considerable danger, while there is very little danger if the disease be limited to a single lobe and not complicated with any other serious affection. Now, in conclusion, let me ask you, how are you to determine that the disease is extending or has extended over an entire lung? We may suspect this from the symptoms, but we cannot dertermine it save by the physical signs. By means of these we can note, day by day, the advancement of the local affection; we can ascertain when and where resolution begins, and follow the progress of the latter up to the restoration of the healthy condition. We cannot do this under the guidance of the symptoms alone, although the latter are of great importance as regards the prognosis and the indications for treatment. Without physical explora-

tion of the chest, the existence of pneumonia would often be doubtful. It is not infrequently overlooked by those who trust to symptoms alone; and important complications, such as pericarditis, could not be discovered. I should do injustice to auscultation and percussion if I omitted to avail myself of all proper occasions to endeavor to impress their importance in medical practice.—*Am. Med. Times.*

Surgery.

On an Operation for Extracting a Stone from the Bladder by Urethrotomy and Dilatation of the Prostatic Urethra by Means of a Dilating-Staff.

BY JOHN WOOD, F. R. C. S.,

Assistant-Surgeon to King's College Hospital, Demonstrator in Anatomy at King's College, Surgeon to the Lincoln's-Inn Dispensary.

The author first called attention to some points in the relative anatomy of the pelvic viscera, important in estimating the value of the different perineal operations of lithotomy. These were illustrated by a diagram embodying the mean results of the dissection and measurements of upwards of forty subjects, and by drawings of the alterations produced by development from the period of birth to adult life, taken from actual dissections of subjects at birth, at two years and a half, eight and a half, and sixteen years, and in the adult. He showed that the surface of the perinæum lies in two planes, anterior and posterior, intersecting each other just behind the bulb of the urethra; and that a line drawn from the middle of the central tendon perpendicular to the posterior of these planes indicates the axis of the bladder, when moderately distended, entering it at the urethral opening, and thus forming a safe guide for the finger and instruments in the perineal operations of lithotomy. In young children, this line is thrown more forwards forming an obtuse angle with the posterior plane. He stated that the nomenclature of the pelvic structures in anatomical works had not had sufficient reference to their actual position in relation to the axis of the trunk in the erect posture. He showed that the proximity of the bulb of the urethra to the anus and rectum varied, in the adult, from three-

quarters of an inch to an inch and a half. At birth, they are in close contact; below the age of puberty, from half an inch to three-quarters distant from each other. This was not sufficient room for the performance of Allarton's operation without considerable section of the bulb, which he considered objectionable, if it could be avoided. He attached much importance to the preservation intact of the deep layer of deep perineal fascia, where it is blended with the fibrous capsule surrounding the prostate, forming the grooved sheath of the levator ani muscle; and attributed to the median class of operations a greater safety against extravasation of urine above the levator ani, from their preserving this layer of fascia entire. In the lateral operation, it was fairly divided, together with more or less of the levator ani. He thought that if the levator were cut at all, it was better to cut it freely, to allow a free escape for the urine; but that it afforded a greater safety to the patient, in all cases in which the size of the stone rendered it practicable, not to open its sheath at all, but to proceed by dilatation from the urethral surface of the prostate.

The author then briefly passed in review the comparative merits and disadvantages of the lateral and median operations. The lateral operation had the advantage in celerity of execution, and, when practised with a free incision, in the more facile removal of a large or encysted stone, and in the free escape of the urine. In safety to the patient of adult years, however, it is inferior, from the impending dangers of hæmorrhage and pyæmia, by its extensive interference with vessels and venus plexuses; and from extravasation of urine into the layers of pelvic fascia above the levator ani, by the section of this muscle, its facial sheath, and of the prostatic fibrous capsule. When the limited prostatic incision is attempted it is more liable also to the accident of the finger slipping from the staff and forcing its way between the bladder and the rectum, especially in the yielding tissues of young children. In the free incision, on the other hand, accidental section of the ureter and oth-

er important deep-seated parts has had fatal results. The median class of operations, depending upon dilatation without section of the prostate and neck and bladder, has the advantages—that no cutting instruments enter the bladder or prostate, and that the incision is confined to aponeurotic structures in the most direct way to the bladder, and does not interfere with arteries or veins of any importance at all. In Allarton's method he thought the means of accomplishing the dilatation were insufficient in the adult, and that additional dilators or gorgets were objectionable on the score of complication and loss of time; that the bulb was freely cut, especially in children, and that the ejaculatory ducts were sure to suffer extensively from laceration by the probe tearing in the median line. He believed that section of the bulb diminished the chances of the patient by exposing him more to the dangers of pyæmia and hæmorrhage, or the consequent formation of a stricture. The incision also, in Allarton's method, was placed so far forwards, and was so limited in extent that great difficulty has been experienced in seizing and extracting a stone in a deep perinæum.

The author considered that our increased experience of the results of lithotomy in the adult had not as yet been followed by such a dimunition of its consequent mortality as might have been expected.

The operation he had practised was based upon the use of staff opening at the curve into the blades, which admit between them, through a perineal incision into the membranous urethra, the forefinger of the operator, to effect the chief part of the dilation. The dilating power was increased by the pressure of the assistant's thumb upon a lever, which causes the posterior blade to turn upon its axis and press backward upon the base of the bladder, holding it firmly towards the perinæum, so as to prevent its yielding before the pressure of the dilating finger. With the slender model which was exhibited, and which was made for a child, the author had dilated in the subject many tough

adult prostates sufficiently to extract good-sized stones without injury to the levator ani or its sheath, or to the prostatic capsule. To make the preliminary incisions he used a very narrow-bladed knife. The form of incision he had practised was a lunated one, commencing two lines to the right of the raphé, just behind the bulb, and carried in a curve to a point midway between the anus and left tuber ischii, terminating opposite to the former. The membranous urethra was then opened (upon a groove exposed by the divergence of the blades of the staff) from the bulb to the prostate gland, a little to the left of the median line, as in the lateral operation, to avoid injuring the ejaculatory ducts. The lateral tension of the urethra rendered this very easy to do. The rest of the opening into the bladder was done entirely by dilatation between the blades of the staff. The patient, a boy aged nine years, was operated on in King's College Hospital, December, 1st. 1860. He had had symptoms of stone for one year. The dilatation was easily and speedily accomplished, the stone at once reached and removed, only a few drops of blood being lost. He made a rapid recovery; the urine passed by the meatus in the first week, and entirely by the natural passage in a fortnight, when he began to have control over its evacuation, which in the third week increased to entire command. In less than a month the wound was entirely healed. This showed how little injury was done to the neck of the bladder and muscles.

The author thought that the form of incision he had used had all the advantages of the median operation, with much more room to use the forceps, &c., without injury to the bulb, rectum, and ejaculatory ducts, and with an easy capability of extension, in case of a large stone, in the site of the lateral operation, but ordinarily without division of the deep layer of deep perineal fascia. The advantages of the dilating staff were: that the lateral tension renders a clean cut into the membranous urethra, and a fair introduction of the finger to dilate, easier to accomplish: that

the dilating finger is guided into the prostatic channel with the increased certainty of a conducting blade on each side, and is aided by the dilating action of the blades holding down the bladder, and preventing its yielding before the pressure of the finger, allowing it at the same time more complete tactile perception of the resisting tissues than can be obtained by the use of gorgets or dilators, which are also thus rendered unnecessary. The pressure of the separated blades guards against the passage of the finger between the bladder and pubes on the one hand, and the bladder and rectum on the other. Lastly, there is a more positive certainty of avoiding section of the prostatic capsule, and exposure to the deleterious action of urine effused into the pelvic fascia above the levator ani, than can be obtained by the use of the knife or gorget in the prostate cutting in opposition to the contracting levator ani.

Mr. Fergusson expressed himself pleased with the great beauty of Mr. Wood's diagrams; but the anatomy which they taught was no novelty. It was well known and taught by anatomists that the bladder in the child was much more out of the pelvis than in the adult; but he had not seen this part so well displayed before. He objected to the instrument invented by Mr. Wood as far too fragile in structure and too uncertain in its probable mode of action, and should prefer the old grooved staff. The prostatic and membranous portions of the urethra were often with difficulty dilated, as proved in the removal of calculi by the forceps; and, except in very young persons, Mr. Wood's instrument would fail to effect dilatation, and even in them its action could not be relied upon. He had no objection to any novelty which might be of service in simplifying or making more easy the operation of lithotomy, but this could not be done by the results of one operation or by experiments on the dead body. Mr. Fergusson then spoke of the importance of discussing the subject of lithotomy, which of late had not been done; while lithotrity had attracted much attention. Of late, there had been a strong

feeling in favor of the median operation of lithotomy; but this had been performed chiefly on children, in whom the lateral operation was almost uniformly successful: to show its superiority, it should be tried in the adults. Statistics in large numbers only could decide the question; but he saw no reason, at present, to prefer the mesial to the lateral operation.

Mr. Skey thought the Society indebted to Mr. Wood for his suggesting the employment of the circular incision round the anus, which, though it was not new, was not sufficiently considered as a valuable rule of practice, by which fewer vessels were wounded, and less bleeding produced. He agreed with Mr. Fergusson as to the inefficiency of the expanding power of the instrument invented by Mr. Wood. He considered the author to be a little too circumstantial in his anatomy for practical purposes, however fit it might be for the dissecting room.—*London Lancet.*

Remarks on Dr. Levis' Application of the Metalic Ligature to the Cure of Varicose Veins, with Report of Two Cases.

BY J. M. BOISNOT, M. D., OF PHILADELPHIA.

It is more with the object of contributing something that may substantiate an operation that the readers of the Reporter are already acquainted with, than to advance anything new, that the following remarks are submitted. The number of cases of varix existing, and the previous want of an operation to safely effect a radical cure, make a method likely to be followed by success, and especially one that has simplicity and freedom from danger to recommend it, of great importance.

Varix depends for its existence upon two principal causes —an imperfect condition of the veins themselves, and anything retarding the return of the blood through them; the

first being due both to constitutional and local causes; the second mainly to mechanical. To be more explicit: in a person where the return of the circulation is unequal to the distribution, we have a cause acting upon the veins that will be followed by distension, not only in the main trunks, but also in the branches. Imperfection in the valves is what I refer to as local, and pressure the mechanical cause. Varix of the lower extremities is essentially a disease of the saphena interna; the continuous length and superficial position of this vein explain, in a measure, why this is so.

A derangement of the circulation must first affect the main trunk; afterwad the confluent branches. Independently of the cause, therefore, we say, as it is the saphena interna that first suffers so must it first be treated. The veins in this disease may be compared to streams which, under ordinary circumstances, are able to drain perfectly the adjoining land; but, when unusually filled, suffer, not only in themselves, but by communicating the force of the flood to tributary branches, damage contiguous parts also. To accomplish the desired end, therefore, we must force the current in a different direction, and away from the suffering parts; this the operation under consideration does most effectually; and, as it is simple and productive of little or no subsequent irritation, we see no reason why it should not meet with general approbation.

The success of the operation so far has been such as to leave no doubt of its efficiency, while its simplicity and freedom from danger tend strongly to recommend it. Subsequent irritation and inflammation seem to have been the principal sources of objection to previous operations, but this is overcome by the fact that silver wire is unirritating, and subcutaneous operations, generally, do not produce inflammation.

Nearly all the operations heretofore advised for the cure of varix have been opposed, or reluctantly performed, on account of their liability to produce fatal inflammation, and yet the idea that a certain amount of inflammation was in-

dispensable to effect a cure has been embodied in all of them. Now, it is this that is avoided by the operation under consideration, and yet the desired end attained, viz: *obliteration* of the veins; and this we maintain is accomplished, not by inflammation, but in the same manner that the umbilical vein and ductus venosus, deprived of their circulating current, become reduced to fibrous cords.

Case 1.—Mrs. R., æt. 42, came under my care in the autumn of 1859. She was suffering from a varicose condition of the veins of the right leg, and an ulcer near the external malleolus of the same. This condition had existed nearly three years, the varix having formed during a twin pregnancy, and the ulcer originated from a bursted vein. From the first she had been under medical treatment, but no operation had been performed. The usual palliative measures had been employed with the usual success.

I relied upon strips of adhesive plaster as the best means for exerting a constant and uniform pressure upon the part. The subcutaneous application of the metallic ligature had not been advised. As soon as I was informed of this operation I resolved to try it upon the case under consideration. In November last I placed a silver ligature upon the saphena interna, about three inches below the knee joint, and one upon a tributary branch, midway between the knee and ankle joints, in accordance with the directions already given in this journal. No dressing was applied to the ulcer, excepting dry lint, and at no time were the wires interfered with until their removal at the time of cure, which was seven weeks from the time of operating.

Case 2.—William G., æt. 63, called me to attend him November 9th, 1860. He was confined to bed by a very large ulcer, situated just above the internal malleolus of the right leg, dependent upon varicose veins. I was informed that the ulcer had existed since 1824, and had never been entirely healed from that date, being a duration of THIRTY-SIX YEARS. He was feeble, anemic, and unable to go about,

excepting from one room to another by the aid of crutches. The ulcer discharged a very offensive, ichorous pus, and presented an extremely indolent appearance and no disposition to heal. He had been under the care of physicians and surgeons of eminence, both in this city and New York, without material benefit to either the ulcer or the veins, although the latter had been subjected to the much lauded caustic treatment.

I proposed the operation of subcutaneous ligation, but was not allowed to perform it before the 28th of November. The points of ligation were the same as in the previous case, the ends of the wire were covered by strips of adhesive plaster, a compress of DRY, soft muslin was placed over the ulcer, and a roller applied from the toes to the knee. The bandage was removed every two or three days for the first two weeks after the operation, and the ulcer washed with soap and water. This constituted the whole of the local treatment. Constitutionally he received a nourishing diet, with quinia and iron. The irritation from the wire was at no time sufficient to produce more than slight redness at the point of entrance and exit. On the forty-sixth day after the operation, finding the veins, where ligated, quite solidified, and the ulcer entirely healed, I untwisted the wires and withdrew them. The cure seems perfect, and, at the present time, he is able to go about free from lameness and in good health.—*Medical & Surgical Reporter.*

Dislocation of the Femur Reduced by Reid's Method

BY B. F. WAGENSELLER, M. D. OF SELINS GROVE, PA.

On the evening of December 3d, I was hastily summoned to the country to see the daughter of Solomon R———, a stout, hearty, young girl, of about ten years of age, supposed to have fractured her thigh bone. Having arrived three hours after the accident, I made a careful ex-

amination, and found it to be a dislocation of the thigh upon the dorsum ilii. Fully satisfied in regard to the diagnosis, reduction was accomplished in the following manner:

The patient being placed upon her back, the leg was flexed upon the thigh, and the thigh gradually upon the body, at the same time directing the limb over the sound one, and giving to it a circular motion up over the pubis, when, whilst giving the leg the rotary motion, advised in this plan of reduction, the head of the femur easily glided into its natural position. The reduction was not accompanied with the "audible snap," usually said to occur in these cases, owing, no doubt, to the age of the patient, but the slipping of the bone over the edge of the acetabulum and into its natural socket was quite perceptible, and gave to the hand of the operator the sensation that all was right. The limb was now easily brought down alongside of its fellow, to the straight position. Simple retentive apparatus was used, so as to confine the injured limb to the sound one. A liniment was directed to be applied to the hip, with rest, and in the course of three weeks the patient was able to walk the distance of half a mile to school.

On account of the difficulties, and, in some cases, almost impossibility of reduction in these cases by the old method, we conceive the profession to be under lasting obligations to Dr. Reid for this discovery. That the method, with perhaps slight modifications, under certain circumstances, will apply to a large majority of cases of dislocated femur, we have no doubt, and to establish its value, we hold it to be the duty of practitioners to make a record as to the success or failure of the cases which may come under their immediate observation. Highly gratified with its result, in this instance, we shall not fail to resort to it again, should opportunity occur, and we hope to see the day when its utility shall be firmly established, and the old and more rude method by pulleys and counter-extension wholly superseded.—*Medical & Surgical Reporter.*

Obstetrics.

Puerperal Insanity.

Reported by Wm. B. Atkinson, Recording Secretary.

PHILADELPHIA COUNTY MEDICAL SOCIETY, }
Wednesday Evening, Jan. 9th. }

DR. REMINGTON, President, in the Chair.

(*Continued from page* 192.)

Dr. GEO. HAMILTON, observing that as one of the most important and difficult points in the treatment of "puerperal mania," was to procure sleep, requested the lecturer, or other members to state, in case of the failure of hyoscyamus, asafœtida, etc., (recommended by the lecturer for this purpose,) what have been the effects of opium, or its preparations, and to what extent they had employed it in these cases.

He said that in asking the question, in reference to the employment of opium, or its preparations, in the disease under discussion, he was fully impressed with the conviction, that the procurement of sleep was, undoubtedly, one great (if not the chief) point to be attained in the treatment of "puerperal mania." It had not occurred to him that opiates, or other medicines of similar character, when successful in producing sleep, were to be viewed as merely palliative, but curative in their action. He concurred in the views of the last speaker, and those of Dr. Darrach, as the important part performed by influences emanating from the reproductive system in the production of this malady. If these views be well founded, irritation, peculiar to these parts, and probably, peculiar in kind, acting upon the brain, and general system of nerves of a subject, hereditarily disposed to insanity, or of an extremely sensi-

tive and impressionable temperament, lies at the base of these attacks generally; or it is highly probable that many cases, possibly the greater number are dependent on moral emotion as their *primum mobile*, quickly bringing into action the sympathies of the generative system, not yet fully restored to its normal condition. In either event, the disease is evidently one of irritation, implicating especially the brain and reproductive system. The suddenness of many of these attacks, the depressed condition of the vital force so often seen, (the consequence of hæmorrhage, or other exhausting agencies during labor, or at the moment of parturition,) the sudden cessation, from time to time, of all the maniacal symptoms, and their equally sudden re-appearance, preclude the idea of inflammation, unless of a low grade, and consecutive in character, the result of protracted and excessive irritation. In the treatment of puerperal mania he had but little experience, the disease being comparatively infrequent. Bleeding generally, or even locally, was as a rule, no doubt justly proscribed. Purging, unless for the removal of accumulated or unduly offensive fecal matter, was, with perhaps equal propriety, rejected; as from the operation of various causes (an unwillingness to take food being a common one,) the tendency of the system is to a depressed condition of the vital forces, and finally, exhaustion. The supporting plan of treatment, as recommended by the lecturer, was, doubtless, the most useful. The difficulty of carrying out this measure, however, is often extreme, especially when the attack supervenes, as it often does, in from the sixth to the tenth day after delivery. When the affection is strongly developed, if the subject possess but moderate strength of endurance, and if, during or immediately after parturition, her vital force has been much impaired, not many days may elapse ere the signs of fatal exhaustion may appear. Independent of the want of nourishment from inappetence, or obstinate refusal to take it, there is nothing so exhausting as the loss of sleep, by night and by day, accompanied, as it

so often is, by the most violent muscular exertion, in attempts to leave the bed, or otherwise. In addition to this, the intellectual and other faculties of the mind are, under such circumstances, unceasing and inordinate in their action; thus increasing greatly the expenditure of vital power. The influence of such agencies in finally accomplishing the destruction of the patient is plainly seen in certain other somewhat analagous conditions of the brain and nervous system, as in "delirium tremens," or in particular stages and types of "idiopathic fevers."

These considerations, coupled with reflections arising from the perusal of detailed cases, and a very limited personal experience, had convinced Dr. H. that whenever opiates or other medicinal agents, were capable of procuring for the patient from four to six consecutive hours of sleep, and this for several days in succession, they would conduce more to the relief and ultimate recovery of the patient, than any other medicinal agency. In a large proportion of such cases, the patient, after sleep, is found much more tranquil and manageable, and likewise more willing to take food, which, if it be of a light, nutritious, and gently stimulant character, will do much towards recruiting and equalizing exhausted and perturbated vital force.

Dr. Hamilton observed in reference to the remark of the lecturer, that he had known cases of "puerperal mania," in which sleep occurred as usual, without moderating, or apparently abbreviating the course of the disease. Dr. H. said these were evidently of a pathological character, exceptional to the class he had alluded to.

Dr. Levick believed that *sleep* was an important means of restoration to health. In some cases which had come under his observation, this was best obtained by means of laudanum enemata, and where these failed, by the application to the back of the neck of a blister, and by dressing this surface with a grain of the sulphate of morphia. Dr. L. would inquire of Dr. Worthington if it were not preferable that patients suffering from acute puerperal mania

should be treated at home, rather than subjected to the fatigue and exposure incident to their transportation to public institutions. The cases seen by Dr. Levick were most benefitted by wine whey, nutritious broths, and the use of opium as before mentioned.

Dr. Worthington replied that his practice was not to give opiates to a great extent, say one-twelfth of a grain of sulphate of morphia every two hours, or the one-fourth of a grain three times a day, etc.; he also employed other narcotics, as hyoscyamus, camphor, and ether and chloroform given internally.

Dr. Hartshorne asked if he used digitalis.

Dr. W. replied, very rarely.

Dr. Remington inquired as to the use of counter-irritants.

Dr. W. replied that he seldom employed them.

Dr. Levick remarked that more was gained by the use of opiates *by the rectum or the skin* than in any other way, especially by the rectum.

Dr. Corse remarked: The paper we have just heard read is peculiarly interesting, as it comes to us with authority, in consequence of the opportunity of extended observation of the writer. He had been struck with the observation that it is universally agreed there is no lesion peculiar to this malady. This is the conclusion we should arrive at *a priori*, and now takes the character of an established fact from the carefully-collected records of observations.

Hereditary tendency to insanity is, no doubt, excited by the pregnant state, for the system is often then profoundly affected in all its parts. The brain is especially the seat of disturbance in pregnant women, principally by sympathy directly with the uterus, and secondarily through some other organs, more or less disturbed by sympathy with it.

It is well known there is often increased amount of blood and increased action of the vascular system; but the occurrence of these is not always attended with cerebral symptoms, and if so, they are not those of insanity.

Where brain symptoms have presented themselves in consequence of pregnancy, he thought a large majority of the cases have been from anæmia. We cannot be surprised at this when we remember how very prone the stomach is to become preternaturally irritable at this period; and as vomiting usually results, the patient is thus deprived of the supply of the material for producing the increased amount of blood now necessary.

Deficient supply of blood to the brain is universally acknowledged to cause many of the cerebral symptoms which stimulate those occasioned by organic lesions.

The blood may be altered in quality, by pregnancy, from some organ being temporarily thrown into disorder—for example, the liver; and one case of this kind he attended which obstinately resisted all other remedies, until he prescribed calomel and Dover's powder. A copious discharge of bile followed these medicines, and entire relief. During the continuance of the portal disturbance, cephalic symptoms were prominent and distressing, the patient often having delirium, incoherent talk, perverted sensations, and extreme despondency.

Other cases have been presented where the kidneys were affected, and the secretion of urine greatly diminished, so that the blood became from this cause of so disordered a state as to produce cerebral symptoms; cups to the back gave relief.

The general nervous system, in many cases, becomes greatly disordered and thrown into that state commonly known as hysterical. Here either mania, spasm, and convulsions may supervene and have a temporary duration, or they may all occur in the same individual successively. Co-incident with these, the most distressing symptom is very obstinate wakefulnes. For all these symptoms he had found great advantage from the free use of opium; the medicine is well borne, and larger doses than usual are necessary; now and then irritability of the stomach is such that all things are quickly ejected. In such cases its admin-

istration by enema has been followed by satisfactory results.

Dr. Worthington said he did not consider that sleep procured by large doses of opium in insanity was incurative; hence he did not give the remedy for its sleep-compelling powers only, but in moderate doses to tranquilize the system, while he used other means to remove the disease. He did not expect, when an insane patient awoke from sleep, that his condition would really be changed for the better, so far as the diseased state of the organs are concerned.

Dr. Turnbull, in a practice of sixteen years, had seen four well-marked cases of puerperal insanity, or mania, as it is sometimes called.

The first case, Mrs. M., aged 32, was delivered, Nov. 9, 1859, of her third child, a large male, but owing to a careless nurse, she was exposed to cold, which ultimately terminated in mammary abscess. A solution of extract of belladonna, etc., having been applied to the breast without benefit, ultimately poultices had to be used and free incisions made.

On the 16th day, her pulse became rapid; she had no sleep; the face flushed; there was pain in the forehead; she manifested great aversion to her nurse, mother, and husband, with wild glances around the room. She said they were going to kill her, etc. Even when her baby was brought to her she took no interest in it. Fearing phrenitis, she was leeched, cold ice-cloths applied to her head, with mustard foot-bath, and purgative and anodynes by the mouth. Pulv. opii, camphor, and hydr. proto-chlorid, were administered without benefit. This state of things continued for almost a week, when it was proposed to her friends to send her to the hospital. Before this was done, Prof. C. D. Meiges was consulted, who recommended the use of Battley's sedative solution of opium, forty drops in thick starch water, as an enema at night. The first night that the anodyne was employed by the rectum, she became comparatively quiet, and, by repeating it for several nights,

she slept well, took nourishment, and gradually improved, so as to be discharged cured.

Dec. 10. Two other cases were treated in the same manner, and a third one by a friend, all termnating in health. The following case terminated fatally:—

Mrs. John T., aged thirty-eight years. When in her ninth month of utero-gestation, her husband died, (January 1860,) leaving her poor, after having, while he lived by his labor as a clerk, supported her comfortably. Her mind was naturally weak and dependent. She was sure she would die. Dr. T. endeavored to reason with her that all was right; but hints by designing persons that the child which was to be born was not her husband's, distressed her much. By the 22d January, she had irregular pains, which were relieved by anodyne enemata; but she was not confined until February 8th. With the exception of the labor being tedious, there was nothing abnormal. Her lochia were natural; lactation the same.

Dr. Turnbull suffering from indisposition, Dr. Atkinson took charge of her for a short time. She again became indisposed, and he found her, (March 9,) quite out of her mind, and she would not remain in her house. The sedative treatment, with counter-irritation by blisters to the nape of the neck, was employed, and her friends advised her removal to a friend's house, where she had more agreeable society. She recovered in April, and went home, nursed her baby, which she had entirely given up, took food, which before she would hardly touch, because she said it contained poison. During her illness, she constantly heard persons calling her, and had other hallucinations. The symptoms all disappeared, so that her friends were congratulating themselves that she had entirely recovered. In May, however, all her symptoms returned with greater violence, and she became a complete maniac, at times furious, so that three persons could with difficulty restrain her. She slept none, ate nothing, and was nourished entirely by injections of soup, etc. She would have injured

her child if trusted with it. Under these circumstances, she was sent to the Pennsylvania Insane Hospital, (May, the 25th,) where she remained without the slightest improvement until October, when she died. There was no post-mortem examination. Dr. Turnbull carefully examined the body when sent to the city. There was great emaciation, loss of one eye, having had ulceration of the cornea before going into hospital, and, from all appearances, she had died from marasmus or pthisis. While in the hospital, she had profuse expectoration, but no cough. Her friends who visited her found the odor of her breath almost insupportable; she had a profuse eczematous eruption, which was first all over the body, but had afterward receded. Her two children have suffered from the same disease.

In the case just related, both the eyes and ears were affected. But the ear is the chief organ of the senses, that is apt to become affected in the insane. Few become blind; but, should the eyes become diseased, it is very difficult to effect a cure, as they resist the proper applications. In chloroform and ether, we have agents by which any resistance, may be entirely overcome. While Resident Physician of the Philadelphia Hospital in 1845, Dr. Turnbull had charge of the insane wards, and found that many of those who were actually not deaf were troubled with difficulty of hearing, tinnitus aurium; but optical hallucinations, were rare, compared with those of hearing. It is a well-known fact that, even in the soundest state of our faculties, we are more liable to be deceived by the ear than through the medium of the other senses. A partial obstruction by cerumen or catarrhal inflammation of the Eustachian tube will cause the patient, so affected, to hear the bubbling of water, the blowing of steam, ringing of bells, or sounds of various musical instruments.

In concluding his remarks, Dr. Turnbull alluded to another cause of insanity: the cessation of the menstrual discharge, or, in popular language, the change of life. He has known this to produce a form of puerperal mania very

difficult to cure. A patient recently under his charge had had three attacks; the first was successfully treated at the Pennsylvania Hospital; during the others she was under his care. The chief indications are fulfilled by keeping the patient amused or interested by change of scene, attending carefully to the digestive apparatus by tonics, controlling the pulse and nervous symptoms by the administration of the tincture of veratum viride in ten-drop doses three times through the day, and the administration of morphine to insure sleep. If the opium should constipate the bowels, magnes. sulphas will relieve this without debilitating the patient. He also employed freely, deep cupping along the spine, especially over the lumbar region, frequently repeated with the happiest effect in relieving the pain and the feeling or desire for something hard to be placed against that region. After cupping, the liniment. saponis with ol. Croton. (℥j to f℥,) is also a useful mode of counter-irritation, and can be kept up until the patient is entirely convalescent.

Dr. Henry Hartshorne suggested that the analogy which some cases, at least of puerperal mania, present to mania a potu, furnishes a reason why sleep might be expected to be in such cases, to some extent, curative. In delirium tremens, he believed that a long and sound sleep was curative in a large majority of instances, whether the sleep were spontaneous or was obtained under the influence of narcotics. The manner of using hypnotic medicines, which he preferred in obstinate insomnia, was the repeated administration of moderate doses at short intervals; a quarter of a grain of sulphate of morphia or a grain of opium, for example, every two hours, or sometimes even every hour. He had never ventured to go beyond this, or even to persist in such doses for many days at a time.

Dr. Nebinger had the good fortune to have met with only two cases of puerperal mania; one occurred before and the other after delivery. Several years ago, while driving about in pursuit of his professional duties, he was

called to, and invited to go into a house near by and see a woman whom the stranger said was "crazy." He visited her, saw she was pregnant, and learned from those about her that she had nearly reached the close of her term. She had been complaining of bad health for several days. Had been distressed with headache, restlessness, and unable to sleep. It was her first pregnancy. For the relief of her headache, without medical advice, she had been freely bled. At the period when Dr. N. saw her she was pale, anemic, full of movement, and talking almost incessantly. There was not any febrile disturbance. He diagnosed puerperal mania. To compose her he gave her sulphate of morphia in one-sixth of a grain doses every two hours. This treatment was continued for two days, during which time the mania became aggravated. At the expiration of the two days he gave her *one quarter of a grain of sulphate of morphia every hour*. To watch the effect, and to the end that she might not take more than was necessary to produce the desired result, he remained with her all night, giving the medicine and observing its action. When she had taken two grains of the sulphate of morphia, she became drowsy. The medicine was then discontinued, sleep soon followed the drowsiness, and when he left in the morning, she was wrapt in slumber. From that morning her recovery commenced, and progressed until she became perfectly sane.—In the lapse of a few days her labor came on, and she gave birth to a living, healthy child. The cause of Dr. N. remaining all night and administering the morphia, was that she was surrounded with unintelligent persons, and he feared to trust the administration of the opiate in large doses, at short intervals, to them, lest they might give more than was necessary; and thus, if they did not damage the woman, they might destroy the fœtus.

The other case referred to was that of a German woman. She had been delivered by a midwife. About seven or eight days after her accouchement he was sent for. She was then suffering from remittent fever. The locality

where she resided was a newly laid out part of the city, low, and imperfectly drained. She recovered from her attack of remittent fever. About two weeks after she had been about her room, before, however, her vigor had been restored, she was seized with fearful forebodings; would cry without any apparent cause; became melancholy, taciturn, and could not sleep. These conditions having developed themselves, Dr. N. was invited to see her again. He found her pale, feeble, without appetite, suffering much mental disturbance, and in general bad health. Regarding her mania as the result of the unhealthy condition of her physical system and the abnormal manner in which most of the functions of her economy were carried on, he did not give her special treatment for her mania, but directed his efforts mainly to the restoration of her general health. Two months and more were consumed in this work before her health became much improved; as, however, her appetite increased and her digestion became better and the red corpuscles multiplied, her mental malady was relieved and shortly after she became physically well; her mind ceased to be unsound. The treatment in her case was the use of such medicines as were calculated to restore the digestive apparatus to health; to normalize the secretions, increase the red corpuscles in amount, passive exercise in the open air, and her removal from her home to her brother's where the hygienic conditions were much better than at her own home. Thus, then, from these two cases, it would appear that there cannot be any plan or system of treatment for puerperal mania, which is adapted to every case, but that each case requires a treatment peculiar to itself, and that the condition of the patient will be suggestive of the treatment required. Symptoms and conditions, not names, must point us to the remedies.

Dr. Turnbull had employed the lactucarium and other narcotics freely in one case by the mouth with but little effect, and was surprised at their rapid influence when given *per rectum*, owing, no doubt, to bountiful supply of

nerves developed during gestation, as shown by the beautiful dissections by Dr. Lee, which the speaker has seen in St. George's Hospital, London.

Dr. Worthington said that he saw every day cases of ordinary insanity in which the patients slept regularly without narcotics, and the disease, notwithstanding, persisted for months. So far as these cases were concerned sleep was not curative.

In reply to Dr. Hartshorne and his supposed analogy between delirium tremens and acute delirium, he would say, that we all know the former to be one of the most curable diseases, in fact some physicians say it requires no treatment and will recover itself with proper care, while it is equally true that acute delirium, to which he referred in the paper he had read, is one of the most dangerous diseases to which the human frame is subject. Dr. Marcé says it is maniacal excitement carried to its utmost limits. If this were true we might make the attempt to quell it by narcotics, but he did not think the opinion was generally received by pathologists. Calmeil shows by his recent researches, that it is an inflammatory condition of the cortical substance, and with this view of its pathology we would not expect opium to execute a curative influence.—

Therapeutics.

Persulphate of Iron as an Internal Hæmostatic.

Read before the Society for Medical Improvement at the Long Island College Hospital.

BY ARNOLD HALLET, M.D.,

Physician to the Hospital.

The object of this paper is to bring to notice the great superiority of the persulphate of iron over any other known hæmostatic agent, particularly as an internal remedy in passive hemorrhage from the lungs, stomach, or any other viscus.

A good deal has been written lately upon it as a local styptic, but I am unable to find that it has been much used as an internal remedy. My attention was first directed to it by Dr. Dudley, in a case of hæmatemesis, and from its prompt action in that case, I have been induced to prescribe it in a number of other instances, and thus far have not known it fail, in promptly arresting hemorrhage in any case.

To illustrate the good effects of its use, I will detail very briefly a few cases.

Case 1.—Mrs. S. æt. 22, of rather delicate constitution, habitually constipated, and suffering from indigestion, was attacked January 17, 1860, after syncope, with vomiting of a quantity of matter resembling coffee-grounds in appearance. Ice was ordered internally, with Warren's styptic every three hours, which controlled vomiting for about twenty-four hours, when she was again attacked with syncope, followed almost immediately by the same characteristic vomiting, with great prostration. Ordered sinapisms to the feet, as they were cold, and five grains of gallic acid every

three hours. After this there was no more vomiting for about the same period, when she was again attacked, as in the previous instances; each time becoming more and more exhausted. To clear out the contents of the bowels ten grains of calomel were now administered, and the same remedies were continued, everything being taken icy cold. But it was all of no avail, the hemorrhage still continued, and finding that I should lose my patient, I suggested a consultation, which being acceded to, Dr. Dudley was called in. The case was diagnosticated as one of congestion of the stomach, consequent upon a deranged condition of the functions of the liver. I omitted to state that her evacuations were of the same black appearance. She was regular in her menstruation. Dr. Dudley suggested the sol. of the persulphate of iron, to be administered in fifteen drop doses every four hours, which immediately arrested all unfavorable symptoms, and there was no return of the vomiting after the first dose.

About two years previously, while in the country, after an attack of syncope, she had quite a free black dejection, which was repeated at short intervals, and without any other symptoms than those of prostration; she was taken to her bed, where she remained for some weeks, and from that time her health has been rather delicate, suffering constantly from indigestion. At present she is in a rather better state of health than usual, and has had no return of hemorrhage.

Case 2.—On the 20th of last November I was called to see a child four years of age, in consultation with Dr. Barber. About three weeks previous it had an attack of scarlatina, and everything was going on well, when suddenly she was seized with hemoptysis. The usual remedies were prescribed, but they were of no avail, the child continuing to expectorate quite freely bright arterial blood, accompanied with a rapid sinking of its physical powers, and great dyspnœa. I suggested that four drops of the persulphate should be administered in water every three hours, which

soon entirely controlled the hemorrhage, but the child died of exhaustion three days after. Soon after the first dose the respiration became easy and the cough rapidly subsided.

Case 3.—Miss T., æt. 13 years, of vigorous health, was attacked with scarlatina on the 5th of last November. She passed nicely through the first stages of the disease, but about the 15th, when desquamation of the cuticle had commenced, observing a little puffiness about the eyes, I immediately examined her urine, which was very scanty, and resembled in appearance water-gruel. Upon boiling it was found to be highly albuminous. A brisk cathartic was administered, and cream of tartar water ordered to be drunk freely. Stimulating applications were applied to the region of the kidneys; on the 18th, three days after, her urine was a little more free, but, with the albumen, it contained a large quantity of blood. Skin hot and dry; tongue furred; pulse not much accelerated. Ordered spir. mindererus. 17th.—Water increasing in quantity, but no dimunition in the amount of blood. Leeches were now applied over the region of the kidneys. 22d.—The quantity of urine excreted was about normal, albumen very much diminished in quantity, but the blood continued as free as ever. Ordered four grains of gallic acid every four hours, which was continued for three days—the bowels being kept open by an occasional dose of the comp. powder of jalap. 15th.—Albumen pretty much disappeared, but the blood still persisted. I now had recourse to the persulphate, and in twenty-four hours the blood had entirely disappeared from the urine; It was then omitted, but the next day there was almost as much blood as ever. A few more doses, however, soon controlled it, and there has been no return of it since. She is now, I am happy to say, convalescent. In administering the persulphate of iron care should be taken to have it largely diluted, and not to give too much at a time, as from its astringent effect upon the mucous coat of the stomach, it is apt to be immediately ejected. I would also state, that I have used it in profuse menstruation with a like

happy result. I presume that it checks internal hemorrhage by exerting its astringent principle upon the capillaries, and also in hæmaturia, by correcting the alkaline condition of the urine, which is said to excite bleeding by its irritating qualities. Inflammation should preclude its use, until it is overcome by appropriate remedies.

In Dr. Hamilton's patient, who was operated upon in this Hospital four days ago for vesico-vaginal fistula, profuse hemorrhage came on yesterday, from the bladder, so much so that quite large clots were expelled through the urethra, and the patient began to sink from loss of blood. I understand from Dr. Lynch, that all other means having failed to arrest the hemorrhage, recourse was had to the solution of the persulphate of iron internally, when the bleeding stopped. But whether "post hoc, ergo propter hoc," is true in this case, I am unable to say.—*American Medical Times.*

4. *On Indian Hemp, particularly in relation to its property of producing Sleep.*—Dr. Fronmuller first employed the Indian hemp in the case of a phthisical patient in the year 1850, and since that time he has devoted himself to the especial study of the properties of this substance. The result has been the production of a treatise founded upon the clinical observation of no less than a thousand cases in which Indian hemp was administered. This plant has been very much extolled by many practitioners in various countries, but has lately fallen into disuse, owing to the supposed uncertainty of its operation. The discredit attached to it is attributed by Dr. Fronmüller partly to the contradictory statements published concerning its operation by various writers, and partly to the difference in its effects in the Eastern hemisphere compared with those observed in Europe. The Indian hemp of India and that grown in Europe present the same external form, but they differ in the relative proportion of narcotic resin which each contains, and which is the active principle of the

plant. It appears that the amount of resin depends not only upon differences of latitude, but also upon the depression or elevation of the regions where the plant is grown. Chemical analysis has discovered that the Indian hemp contains gum, bitter extractive matter, albumen, chlorophyll, ethereal oil, and a peculiar resin. This resin is called *cannabin* by some writers, and forms six to seven per cent. of the dried plant. The ethereal oil has been obtained by Martius only in small quantity; it is of a slightly yellowish colour, of a peculiar ethereal camphor-like smell, and an aromatic astringent, and afterwards bitter taste. The preparations of Indian hemp hitherto employed are the powdered plant for pills or powders, resinous extract of hemp in powders or pills, tincture of the resin, and emulsion.

With regard to its application to the practice of medicine, Indian hemp may be considered valuable as a tranquillizing antispasmodic drug. It has been employed with favorable results in tetanus and trismus, cardialgia, rheumatism, and in some mental diseases. Of 1000 cases in which this drug was administered by Dr. Fronmüller, 552 were males and 448 females, and the patients were of various ages, from one year to fifty and more. The principal diseases of the patients were tuberculosis, inflammation, surgical diseases, rheumatism, diseases of the eyes, nervous diseases, and dropsy. The greater part of the cases were treated by the spiritous extract prepared by Merk in Darmstadt; but others were treated by the extract prepared by the late Jacob Bell, of London. It is to be observed that all the observations were made on cases in which there had been no sleep for several nights, and in which the continuance of sleeplessness was to be anticipated unless some narcotic was employed.

Out of the thousand cases it was found that the narcotic property of the hemp was completely developed in 530, partially in 215, and little or not at all in 255. With the extract of Indian hemp the best effects were produced 145

times with a dose of 12 grains, 64 times with a dose of 8 grains, 63 times with a dose of 10 grains, 35 times with 16 grains, 22 times with 3 grains, 17 times with 2 grains, 15 times with 14 grains, 14 times with 20 grains, 13 times with 6 grains, 12 times with 5 grains. The period of falling to sleep, and the duration of sleep in the cases, are numerically recorded by Dr. Fronmüller, and also the number of cases in which unfavourable results ensued on the day of taking the drug, or on the next morning. Comparative observations were also made with morphia in cases where the Indian hemp had failed. Out of 29 cases in which Indian hemp had produced no effect, sleep was produced by morphia in 24. The dose of morphia was in general rather a strong one—from one-sixth of a grain to 2 grains—in order to induce sleep. In the remaining 5 cases the morphia produced no effect.

The conclusions to which Dr. Fronmüller arrives as the results of his observations are the following: 1. That Indian hemp, among all the known medicines which cause stupefaction, is that which produces a narcotism most completely supplying the want of natural sleep, without occasioning any great excitement of the vascular system, without special stoppage of the secretions, without the supervention of unfavorable consequences, and without subsequent paralysis. 2. That Indian hemp, on the other hand, is not so strong nor so certain in its operation as opium. 3. That Indian hemp may given in all acute inflammatory diseases and in typhus fever. 4. That it is worth a trial to alternate the Indian hemp with opium in cases where the latter fails. 5. That the best mode of administration is the alcoholic extract in small pills which contain an addition of the powder of the Indian hemp. The lowest dose for producing sleep may be estimated as eight grains given in pills of one grain each.—*B. and F. Med. Chir. Rev.*, 1861. from *Vierteljahrschrift für die practiche Heilkunde*, 1860.

Iodide of Ammonium in Constitutional Syphilis.—M. Gamberini, of Bologna, has, from an experience of fourteen cases, arrived at the following conclusions regarding the use of iodide of ammoinum in constitutional syphilis.

Iodide of ammonium is indicated in all cases where the iodides of potassium and sodium are employed, and produces a rapid cure. In syphilitic cases, the following results were obtained: five were cured in a fortnight, three in three weeks, five in a month, and one in five weeks. In the last case the medicine was not well tolerated, and had to be given in small doses.

The dose is from two to sixteen grains daily; the last named quantity is but rarely required. Intolerance is an exceptional occurrence. Externally, iodide of ammonium has been usefully employed in frictions (three grains to an ounce of olive oil), in cases of nocturnal syphilitic pains of the muscles or joints.

Intolerance of the medicine is denoted by a burning sensation in the throat and heat in the stomach; these rapidly cease when the medicine is suspended for a day or two.

M. Gamberini states that he has removed, by means of iodide of ammonia, the indurations following the cicatrization of chancre, and the enlargement of inguinal glands. The other syphilitic affections in which he has employed it successively are astralgia, rheumatic pains, periostoses, and enlargement in the cervical glands.

M. Gamberini states that iodide of ammonium possesses the following advantages over the analogous salt of sodium: 1. Its action in attaining the same therapeutic object is more rapid; 2. A much smaller dose is required.—*Bulletino delle Scienze Mediche;* and *Gazette Hebdomadaire*, June 1, 1860.

The conclusions at which M. Gamberini has arrived with respect to the iodide of ammonium agree very closely with those stated by Dr. Richardson in a communication to the Medical Society of London.—*Brit. Med. Journ.*, June 30, 1860.

On the Therapeutical Employment of Double Iodide of Iron and Quinine.—Dr. VIOLETTE has given the double iodide of iron and quinine in several affections in which the preparations of iron have been recommended, and he has been enabled to prolong its use without meeting with the symptoms so often produced by the separate use of iron and quinine. He has never observed either weight at the stomach or offensive eructations, or gastralgia. In many affections of the uterus, after the local treatment has succeeded, the iodide of iron and quinine has seemed to restore the strength and revive the appetite. He has witnessed the same results in convalescence from typhoid fever, and from all diseases which induce a considerable impoverishment of the blood. Dr. Violette considers this medicine peculiarly efficacious in chlorosis. M. Becquerel allowed him to administer it to some young chlorotic girls, whose leading symptoms were complete loss of colour of the mucous membranes, a waxy complexion, excessive weakness, total loss of appetite, blowing murmur in the heart and carotids; in such cases Dr. Violette found that a rapid improvement followed the use of the double iodide. The appetite returned very quickly, and at the same time the strength was restored; a slight rose colour replaced the pale tint of the mucous membrane, and the extreme paleness of the face was changed for the natural colour.—*B. and F. Med.-Chir. Rev.*, Jan., 1861, from *Gazette des Hôpitaux, July*, 1860.

Chloroform Liniment for Dental Purposes.—Take the white of an egg, and add an equal bulk of chloroform: let it digest four hours at an ordinary temperature, when it is fit for use. Apply to the gum, immediately above the aching tooth, by saturating a piece of lint, one half inch in length by one fourth in width. Upon this place a second piece of lint, larger than the first, to protect the lips, which must be allowed to carefully fall upon the two, so as they may retain their place. We have found this an invaluable relief for such disturbances as are not dependent upon ful-

ly-developed inflammation, such as neuralgic disturbances and the first stages of periostitis. A more powerful liniment can be made, by taking one part of white of egg and four parts of chloroform. Put them in a bottle and plunge it in a water-bath, at a temperature of from 120° to 140° Fahrenheit—gelatinization takes place in four minutes. This preparation is to be rubbed on any painful part, when great relief will be experienced. The slow cauterization it produces, and the protection of the part from the atmosphere, render it a very powerful counter-irritant, as applied to the gums in the manner described. We have found it in many cases highly serviceable, and recommend it to more general use. The cold preparation is, perhaps, the best and easiest made; and when a decided effect is required, it should be repeatedly used.—*American Journal of Dental Science.*

Relief of Certain Forms of Aphonia by Anæsthetic Vapors. By Frederick D. Lente, M. D., of Cold Spring, N. Y.—The recent occurrence of a case of this kind, of which the following is a brief abstract, induces me to give publicity to one very similar to it, which occurred in my practice a few months ago.

T. B., æt. 19, a carman, living in London, was attacked in the early part of 1860, with hoarseness, enlargement of the sub-maxilliary glands, and sore-throat. In March, he applied at one of the Dispensaries for relief, and was treated, but without much benefit; he then applied in turn, at several other hospitals, including St. Bartholomew's; having, in the mean time, entirely lost his voice.

In December, he applied to the district medical officer, who, on examining the throat, found the left tonsil slightly inflamed, but no other appearance of disease, and could detect no syphilitic taint or history. He, however, noticed considerable rigidity of the muscles of the jaw, and thought it advisable to try the inhalation of *chloroform*. "He was accordingly placed under its influence, and its effect was

truly magical, as he called out for his mother quite distictly. He went home, and agreeably surprised his friends by speaking to them the first time in *eight months*, articulating every syllable." A week afterwards, his voice had not left him.

The following is a brief history of my own case. Miss M. W., an unmarried female about forty years of age, has been for the most part bed-ridden for the last ten or twelve years, apparently from the effects of a violent and protracted attack of dysentery, for which she was treated by another physician. During all this time, she has also been more or less troubled with a reducible formal hernia. She has never been at all hysterical, or even nervous, in the usual acceptation of the term. Some time in the early part of 1860, she lost her voice, so that she could not articulate above a whisper. This was a source of great annoyance to her, as she is very fond of conversation. She was, of course, very solicitous to have something done for her relief; but, as I could discern no lesion whatever about the fauces or larynx, and could assign no possible cause for the *aphonia*, I was at a loss what course of treatment to pursue, and so did nothing, comforting her with the hope that she might one day regain her voice as suddenly as she had lost it.

In December, 1860, her hernia came down, could not be reduced, and became strangulated, resisting all the attempts of Dr. Richerson, who was first called, and of myself subsequently, to reduce it. In our attempts, we used the inhalation of sulphuric ether twice each time, the patient on her recovery, expressing her belief that she articulated with less effort, although she still spoke in whispers. Finally, a resort to the knife became necessary, and she was again brought fully under the influence of the anæsthetic. The operation was protracted from several causes, and she was under the full influence of the ether for nearly two hours. As soon as she had fully recoverd from the effects of the anæsthetics, she exclaimed, apparently with the greatest delight, and in quite an audible voice,—"Doctor, I can

speak," and she has been "speaking" fluently ever since, now nearly three months.

I always had a suspicion that *hysteria* was at the bottom of this case of aphonia; and Dr. Richards, the reporter of the London case, asks—"May it not be reasonable to conclude that this case was one of mere hysteria?"

It is possible that many chronic forms of throat difficulty, whether attended or not by aphonia, might be benefitted, when all other means fail, as they are so apt to do, by the stimulating, anæsthetic, or antispasmodic effects of ether or chloroform, which treatment, the perusal of these cases may induce others to try.—*American Medical Times.*

Treatment of Blennorrhagia by Injections of Subnitrate of Bismuth.—The subnitrate of bismuth has been lately recommended as a local application in blennorrhagia, but as the results were not altogether satisfactory, M. Mourlon has investigated the circumstances which prevent the success of this kind of medication. He found that the injections of the subnitrate of bismuth, often irritated the urethra; and on testing the salt, he ascertained that it reddened litmus paper. In order to obviate the acidity of the injections, he caused the salt to be washed until it presented no acid reaction; and under these circumstances he has found the injection almost uniformaly successful, and has introduced its use into the military hospitals. In a memoir published by M. Mourlon, he states that out of 37 cases, 32 were cured, and that the average duration of the treatment was twenty-one days. With the exception of four patients who came into the infirmary for relapses, all the cases presented blennorrhagia of five to eight days' duration, and they were all acute cases. In none of them did the inflammation extend to the deep parts of the urethra, so rapidly was it arrested in its progress by the subnitrate of bismuth.—*B. and F. Med.-Chir. Rev.*, Jan., 1861, from *Bull. Gén. de Thérap.*, Sept. 30, 1860.

Reviews and Editorial.

1. *On Diseases peculiar to Women, including displacements of the Uterus.* By Hugh L. Hodge, M. D., Professor of Obstetrics and the diseases of Women and Children in the University of Pennsylvania. Philadelphia: Blanchard & Lea, 1860.
2. *A Treatise on Human Physiology; designed for the use of Students and Practitioners of Medicine.* By John C. Dalton, jr., M. D., second edition revised and enlarged, &c. Philadelphia: Blanchard & Lea, 1861.
3. *A Treatise on Fever, or Selections from a Course of Lectures on Fever, &c.* By Robert Lyons, K. C. C. &c. Philadelphia: Blanchard & Lea, 1861.

We have received the three works, the titles of which are given above, from the accomplished publishers, through the hands of our enterprising and accommodating townsman, W. L. Pomeroy; and we shall proceed to notice them in the order in which they are mentioned.

Hodge on Diseases Peculiar to Women. This is a contribution to medical literature and science from one of the most earnest-minded, zealous and successful medical teachers of this country. In this work, Dr. Hodge presents us with his particular, perhaps we ought to say peculiar, views, in relation to that class of diseases, or more properly speaking, those morbid phenomena, which present themselves for our study and treatment in females, and which, the professor alleges, may be traced to the effects of irritation and of sedation in the different tissues and organs of the economy, especially of the uterine system.

Our author says in his preface, and we much prefer he should speak for himself on this subject, that "This work, prepared at the request of many of my pupils, presents the results of my observations and reflections on the diseases peculiar to women. These diseases may be traced to the

effects of irritation and of sedation in the different tissues and organs of the economy, especially of the uterine system. The causes of such disturbances are exceedingly diversified; but, so much depends on displacements of the uterus that it was thought advisable to devote a separate part to their consideration, especially as the consequences and treatment of such accidents are still the subjects of much professional discussion."

In the above extract we find, without doubt, the real motive which has impelled Dr. Hodge to become an author. He has been for many years importuned to give his views, *in book form*, on the "diseases peculiar to women." Many of his pupils will be gratified to know that they now have their kind mentor always at hand and ready for consultation

This treatise is systematically divided into three parts. The first part relates to diseases of irritation or of exalted and deranged irritability or susceptibility; the second to displacements of the uterus, which Dr. Hodge regards as the chief cause of the diseases of the first part; while the third part treats of the organic and nervous diseases of sedation, but especially of sedation of the uterus with its consequences. In a word, the work has been written for the purpose of giving to the medical public through the press professor Hodge's views on the pathology and therapeutics of the neurotic states of the uterus and its appendages.

But we seriously doubt whether the professor has added an atom to his standing as a medical philosopher and teacher by writing this book. We may be mistaken; but our judgment is, that those who have held rival opinions will now have an advantage over him, which they have not heretofore enjoyed.

That Dr. Hodge considers too many of the diseases of women to be owing to irritable uterus, must be apparent, we think, to the careful student of nature, and the daily practitioner of medicine who brings to the study of this subject an unprejudiced mind. So far from this being always the case, or

even most generally so, we incline to the opinion that our author has reversed somewhat the condition of things, at least as regards their importance. May not a general morbid irritability of the whole system, in which the uterus in an equal degree participates, or even, from well known causes, in an overbalancing manner sympathises, be oftentimes the true state of the case? and will not such irritability of uterus, as well as of the whole system, be more certainly cured by appropriate hygeinic and general treatment, than by the introduction of a pessary into the vagina? We know it will; because we have frequently seen it done. We also know that slight displacements of the uterus do not necessarily require the use of pessaries for their relief. Moreover, that Dr. Hodge attaches too much importance anyhow to the use of pessaries, may, we think, be very justly inferred from the following quotations from his work. Speaking of the essential benefits and *perfect* relief experinced from them, he says:

"That the local symptoms of weight, pain, etc, the leucorrhœa, the menorrhagia, the dysmenorrhœa, and all the innumerable direct and indirect symptoms of spinal and cerrebral irritation, including neuralgia, nervous headache, nervous affections of the larynx, lungs, heart, stomach, bowels, etc., as also spasms, cramps, and convulsions, may often be dissipated; that the intellectual and spiritual being may be elevated from the lowest state of depression, bordering on melancholy, or be delivered from the highest degree of maniacal excitement, and that the whole economy may thus be revolutionized. Patients are often amazed at their own altered sensations; they can hardly realize their identity—feeling as if they were either renovated, or that they had been transported to a 'new world.'"

The lever pressary is the kind preferred by Dr. Hodge and the one which produces the *wonderful effects* detailed above. The wearing of it, "does not necessarily," he says, "produce any irritation, organic or nervous, or any leucorrhœa, menorrhœa, inflammation, etc. It can be worn at all times, night and day; it interferes with no motion, and no function; the patient has no attention to pay to it, ex-

cept a daily vaginal wash; she may, and often does forget its presence; can enjoy her connubial pleasures, can move about in society without anxiety, is free from local and general nervous irritations, from corporial, intellectual and spiritual disturbance, &c., &c."

Now, however much we may admire professor Hodge, and we really have had great respect for him, we certainly have no special liking for such transporting fancies as these. Indeed, we hope to live to see the day, when the present fashion for pressaries and speculums will be toned down by judgment and discrimination, good taste and virtuous feeling.

Yet, after all, this book is a valuable contribution to medical literature, and must be regarded as one of the standard works of the day; because as to some of the subjects discussed by him, Dr. Hodge is almost the only medical historian. We refer particularly to those nervous affections dependant upon irritation of the medullany matter of the brain, spinal marrow and nerves. He describes these well; and we know that many of his suggestions as to their treatment will be found eminently useful in practice.

Dalton's Treatise on Human Physiology.—This is the second edition of this work, revised and enlarged. In the preface to the first edition the author says: "This volume is offered to the medical profession of the United States, as a text-book for students, and also as a means of communicating, in a condensed form, such new facts and ideas in physiology as have marked the the progress of science within a recent period." To accomplish this object, it became necessary to present not only the conclusions which physiologist have been led to adopt on any particular subject, but to establish or coroborate them by original investigations, or by a repetition of the labors of others, thus showing the experimental basis upon which the conclusions are founded. Dr. Dalton's learning and ability as a physiologist and teacher have enabled him to produce the very best text-book on

human physiology that we ever read; while, if we are not greatly mistaken, it will prove to be equally as well adapted to supply the wants of the daily practitioner. It is commendable for its originality, its clearness; for its fullness and beauty of illustration; and for the simple though elegant language in which it is written. Every intellgent and cultivated physician in the country ought to have this book.

3. *Lyon's Treatise on Fever.*—This is an admirable work upon the most remarkable and most important class of diseases to which mankind are liable. Even in war the deaths by fever greatly exceed in number, those which are caused by saber cuts and gun-shot wounds. Hence a complete and thorough education in the pathology and therapeutics of fever constitutes the first most essential requirement of the medical officer in the public service, as well as the civilian in full and daily practice. "But," our author says, "I believe that while with a competent knowledge of anatomy and the ordinary principles of surgery, the results of even one campaign will make an efficient operator of the diligent and observant staff and regimental assistant surgeon, and prepare him for almost any emergency of the battle field, nothing can supplement the want of an early and systematic training in the pathology and therapeutics of fever. I have myself guided the eager and nervous, though resolute hand of a junior assistant-Surgeon in his first operation in the field, and I have seen that same person, but a few months later, wield the knife with all the skill, the dexterity, and the firmness of a practised operator. On the other hand, I have known men to be bad practitioners in fever, who were not deficient in ability or power of observation, who had passed through many campaigns, and who had had repeated opportunities of witnessing fever epidemics on a large scale, but who, from deficiency in original training and in the principles of the pathology and treatment of fever, continued, and I firmly believe were ever

destined to continue, unsafe practitioners in this great class of diseases. Indeed, I believe that if the ground work of this most essential study be not properly laid before you pass into the turmoil and agitation of active professional life, no matter what your abilities, no matter what your subsequent acquirements, you will never deserve that amount of confidence that could be safely reposed in the diligent student of three years' standing, who had zealously pursued the study of fever as taught in this city." Such is the opinion of one who was himself a surgeon of the British army in the Crimean War, and who was afterwards a lecturer in the medical school of Dublin. When entrusted as medical officer with the care of the chosen troops of his country in time of war, he discharged duties of high character, immediate importance, and direct utility; and yet he has rendered equally as important and useful service to his country and to mankind, we think, by his lectures and published writings.

In his preface he says: "As it would not be possible to embrace in a single volume all the varieties of fever, I have thought it best to deal only with those forms of the disease which are of most practical importance." Hence, we have treated of in this volume, Simple Continued Fever, Varieties of Synochal Fever, Typhous Fevers, Typhoid Fever, of Crimea, Yellow Fever, Pathological Anatomy of Yellow Fever, and the Yellow Fever of Lisbon. These, together with three other chapters, being the first in the book, on general observations, General Pathology of Fever, and classification of Fevers, constitute a whole, which as a systematic work on Fever, is entitled to rank among the first of its class. The author seems to be fully persuaded of the paramount importance of the study of Fever, and thinks it actually criminal in a medical man not to be prepared by diligent study with such a knowledge of its pathology and therapeutics as is requisite to oppose successfully the hostile advances of this fell disease. We trust this work will be generally read and carefully studied, especially as

the present condition of our country makes it of the utmost importance that our medical men should be thoroughly educated upon the subject of Fevers.

The Transactions of the American Medical Association. Vol. xiii, 1860, *Pp.* 930.—We have also received from Mr. Pomeroy the above work, which, in appearance, is very much like the preceding volumes of Transactions of the American Medical association. It contains thirteen papers written by different persons, making a ponderous volume, too inconveniently large to handle easily or to read with comfort; while it can hardly be classed, properly speaking, among books of reference.

The address of the retiring president, Dr. Henry Miller, is on the subject of medical education. It is an old theme with the association, and one which has been further ventilated in this volume by the regular report of the Standing Committee on medical education, written by Dr. Reese. Every reading medical man in the country, we presume, is familiar with the principle ideas and main arguments of the Report and the Address. They may be comprised in the charge that, medical students are not sufficiently well instructed in their profession to practice it, and that the remedy for this evil is to "elevate the standard" of medical education. Almost the same things have been put forth by the association every year, and we have no dobut much will be said at the Chicago meeting in June of a like character. Whatever any material progress and improvement have been effected in medical education by the annual efforts of the association remains to be seen. The schools being wholly independent of the association are fully capable of successfully managing this matter, and thus carrying out their own plans and purposes in regard to it. This, indeed, they have done; and if the opinion of the retiring president, as set forth in the following extract from the address, is entitled to much weight or credit, then there has not only not been any "*elevation in the standard*" of medi-

cal education within the last quarter of a century, but a most decided falling off. He says, "That there has been a great default in medical education within the last five-and-twenty years, it were useless to deny. The education of physicians has not kept pace with that of theologians, or even lawyers; and our profession has so far lost caste as scarcely to deserve to be ranked among the learned. I make this confession in no captious spirit, but with deep and painful mortification.

But is this so? Have we fewer good physicians and surgeons, and well educated medical men now, than we had twenty-five years ago? Are the physicians of our country less diligent students or careful observers than formerly? or are our medical men less respected abroad than they have been heretofore? We think not, and believe that Dr. Miller is, in the main, mistaken. Yet we urge upon private teachers, and especially upon the Schools a due consideration of the subject, for they can together accomplish much.

The next paper is by Dr. Smith on the medical Topography and epidemics of New York. It possesses the advantage of a map, but it is very long, occupying nearly two hundred pages, and is unquestionably inferior in practical value to a report from Dr. James H. Dickson of this State upon the same subjects.

The next paper comes under the head of the surgical section, and is from the pen of Moutrose A. Patten, M. D., Mo. It occupies about sixty pages, and is a very good résumé on Anchyloblepharon, symblepharon, trichiasis entropion, ectropion, and strabismus.

The next in order, is, a report on the improvement in the art and science of surgery in the last fifty years by Joseph N. McDowell, M. D. There is about forty pages of it, much of which is devoted to home surgeons, home surgery and home folks generally. We yield to none in love for our country and admiration of our countrymen. The *rimculum natale soli* is the governing principle with us, and we mean to stand or fall with our section: but there is

something quite distasteful in this paper. It is written in a fulsome style and contains disagreeable matter, in both respects wholly unbecoming the subject and the occasion.

There are eleven other reports, on different subjects, embracing about four hundred pages, but we have not the space or time to give them a distinct notice, which we regret very much, as this volume of Transactions of the American medical association may be the last of the kind that will ever issue from the American press.

We are under obligations to Charles T. Evans, Esq., publisher, of New York, through Mr. Pomeroy, for An Epitome of Braithwaites Retrospect of Practical Medicine and Surgery, containing a condensed summary of the most important cases; their treatment, and all the remedies and other useful matters embraced in the forty volumes—the whole being alphabetically classified, and supplied with an addenda, comprising a table of french weights and measures, reduced to english standard—a list of incompatibles—explanation of the principal abreviations occurring in pharmaceutical formulæ—a vocabulary of latin words most frequently used in prescriptions, and a copious index, in six parts, by Walter S. Wells, M. D.

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Original Communications.

Tobacco as a Therapeutical Agent.

BY J. F. SHAFFNER, M. D. OF SALEM, N. C.

"The herb which borrows Sante Croce's name
Some eyes relieves and healeth wounds; the same
Discusseth the king's evil, and removes
Cancers and boils; a remedy it proves
For burns and scalds; repels the nauseous itch,
And straight recovers from convulsions fits.
It cleanses, dries, binds up and maketh warm
The headache, toothache, colic, like a charm
It easeth soon; an ancient cough relieves
And to the veins and milt, and stomach gives
Quick riddance from the pains which each endures.
Next, the dire wounds of poisoned arrows cures.
All bruises heals, and when the gums are sore
It makes them sound and healthy as before;
Sleep it procures, and anxious sorrows lays,
And with new flesh the naked bones arrays.
No herb has greater power to rectify,
All the disorders in the breast that lie,
Or in the lungs.—Herb of immortal fame!
Which hither first by Santa Croce came,
When he (his time of nunciature expired,)
Back from the court of Portugal retired;
Even as his predecessor, great and good,

Brought home the cross, whose consecrated wood
All christendom now with its presence blesses;
And still the illustrious family possesses,
The name of Santa Croce rightly given,
Since they in all respects resembling heaven,
Procure as much as mortal man can do
The welfare of our souls and bodies too."

In a prize essay on "*The use of Tobacco and its injurious effects upon the human system*," published in the August (1860) number of the "Medical Journal of North Carolina," occurs the following paragraph: "The uses of Tobacco are various, both medically and as a luxury. Medically, its properties may be divided into those that are *real*, and those that are *supposed*. The *real*, were generally known among physicians, even at an early period, who ascribed many virtues to it in obstinate diseases. It may, from the experiments and coroborating assertions of many authors, be pronounced a valuable acquisition to the Materia Medica, and more extended inquiries relative to its properties might very appropriately be made. It is said to be stimulant, sedative, narcotic, sudorific, emetic, diuretic, cathartic, errhine and anthelmintic.

In the present essay, my object shall be, to make some enquiries, relative to the medical properties of Tobacco; and in so doing, will, as in my former, confine my remarks to the principal and only officinal variety of the species, *Nicotiana Major Latifolia*, or the large broad leafed Tobacco.

Of this the leaves alone are officinal in U. S. Pharmacopœa. Analytical chemistry exhibits the presence of two active principles—the one an acrid volatile substance, with little color and alkaline reaction, which has been called *Nicotin;* the other, a camphoraceous, oily product, found in much less quantities, known by the name of *Nicotianin*. An empyreumatic oil has likewise been obtained by distillation, officinal as *Ol. Tabaci*. All these are very poisonous, though *Nicotianin* is believed to be most powerful in action.

Stimulant. The stimulating effects of Tobacco have long been known, and did not escape the discerning minds of our predecessors. The very ingenious experiments of Dr. Cullen, described so forcibly by himself, must sufficiently demonstrate to every one this property of the plant, and I would gladly avail myself of his experiments, by making extracts, did it not demand more space than I am desirous of occupying.

However, here I will endeavor to describe an experiment upon my person, which though it should not advance any thing new, may at least prove interesting. Before commencing, it may be well to remark, I have never used tobacco in any form.

Having obtained a cigar I commenced smoking about one hour after my usual dinner. Fully cognizant how ill on a former occasion a few seconds of smoking had made me, I very much feared my experiment might prove an entire failure.

After a few whiffs, a sense of nausea was rather oppressive, but this soon disappeared. An aromatic warmth diffused itself all over my throat, which extended to the stomach, and continued for about half an hour. Within the first three minutes the pulsations of my heart increased from 76 to 79 beats per minute, continuing to augment, both in frequency and tension, until the 30th minute, by which time they numbered 104 per minute. An oppressive nausea now seized me, alternating with frequent eructations, violent retching, cold perspirations, speedily followed by a sensation of intense sickness, and finally, profuse vomitings. My pulse now became weak and feeble, an indescribable dizziness seized me, and I was unable longer to maintain the erect position. In this state I remained some ten minutes, after which I felt relieved, my pulse still beating quick and feebly. A violent headache now ensued, together with a general sensation of weakness and nervous debility, of which I did not entirely recover until the following day After the lapse of one hour, I fell asleep and soon afte

awaking, found my pulse 74, headache not much improved. Even the following morning, the taste of tobacco was yet appreciable, and I felt an oppressive kind of languor.

From the above experiment I conclude the effect of tobacco to be, in the first place, to increase the frequency of the pulse, and to elate the spirits; in the second, to depress the former and bring on a sensation of drowsiness and sickness in the place of the latter.

Sedative. The sedatory effects of tobacco are attributable to a secondary operation, or indirect debility produced by its immense stimulating powers, when disproportioned to the excitability of the system. To the nervous system and through it to the circulation, it is a most powerful sedative. Few articles indeed do we possess in our Materia Medica more powerful, and in its administration great care is requisite, lest a fatal sedation be produced. Its great liability to produce gastric uneasiness, has ranked it as a nauseant sedative, and this has very much limited its use, being chiefly, when thus employed chosen by virtue of its speedy action. For this reason it is frequently administered in Tetanus, and at times with happy results. Indeed the complaints in which it is most usually employed, are those characterized by spasm, where a powerful and prolonged sedation is requisite. Among the many diseases in which it may be advantageously employed, I may mention: Hernia, especially of the incarcerated variety where it generally occurs that costiveness is one of the most alarming symptoms, and "it is in such affections," says Dr. Bell, "I would recommend tobacco smoke, thrown up in form of injections, as preferable to all other remedies."

In Intestinal Tympanitis, clysters of tobacco have been found invaluable, slight purgation, nausea and diaphoresis being induced.

In asthmatic cases, it has frequently afforded much relief, bringing on free expectoration, invariably followed by great amelioration of symptoms. In dislocations, especially of obstinate or very muscular individuals, a tobacco enema

may afford a happy substitute, in the absence of chloroform or ether. Other obstinate diseases might yet be mentioned in which the sedative properties of tobacco have been of marked benefit.

In every instance alluded to, the affection is owing to spasmodic contraction of muscular fibre, and the relief afforded by the administration of some preparation of tobacco, is due to complete relaxation.

There can be little doubt that this article, like all other powerful sedatives, exerts a direct influence on the nervous system. Of the precise nature of its impression, we know nothing. The most careful examinations, directed by learned, scientific and observing men, exhibit no physical alteration in the nervous structure. When administered in large and decided doses, it immediately depresses the vital forces, scarcely allowing any time to observe the rapid transition from life to death. Such results however, are only manifested when it is administered in a concentrated state; while, when properly diluted, the effects are merely of a depressing character. Hence the great advantage of the medicine in inflammations, and all kindred affections.

Narcotic. There are those who seem to believe these powers are merely assumed, and attribute the narcotism to its sedative tendency. It has moreover been called a sedative narcotic. Experience proves, if one unaccustomed to its habitual use, indulges either by smoking or chewing, a drowsy effect is the result. My experience already referred to, has been of this nature.

Prof. Wood writes: "When moderately, though habitually employed, not in sufficient quantities to induce nausea, it is said to produce an agreeable, soothing effect, inducing pleasant feelings, which has rendered it a favorite, an almost universal article of luxury throughout the entire world. There is also a slight peculiar impression on the brain, for which there is no adequate name, and which only those who have felt it can appreciate." In toothache, the smoke of tobacco frequently imparts relief after all

other remedies have failed. Here its action is narcotic, and only so, the morbid sensibility of the nerve being but temporarily destroyed.

Diaphoretic. Small doses certainly relax the pulse and skin, and generally induce copious diaphoresis, without much previous stimulation. Therefore, in nauseating doses, whereby sweating is produced, its exhibition in fever, is invariably followed by a salutary effect. We have recorded a well authenticated case, in which the external application of the leaves to the wrists of a child, produced considerable nausea, *free diaphoresis*, and at length vomiting with repeated alvine dejections. The child had been for some time afflicted with obstinate and intractable fever, and usual remedies had all failed in affording relief. By the virtues of tobacco in the manner above specified, the disease was totally subdued, and the child happily rescued from impending death.

From this then, is it not probable that the complicated operation of tobacco, would render its exhibition beneficial in many cases of fever? And would it not in this consideration be expedient and wise for physicians to practice the use of it more frequently than they do? Its operation as a sudorific is of course indirect. Its main agency is exerted on the nervous and circulatory systems, which it depresses, and to this quality is due its efficacy.

Diuretic. Of its virtues as a diuretic, we have considerable evidence. In cases of Ascitis and other dropsical affections it has proven valuable as a remedy. Indeed, some writers contend it is excelled by none of our indigenous plants, of which there are many. An instance is related, in which the *Digitalis Purpura* so much celebrated for its diuretic quality, failed to relieve a violent case of Ascitis, and the tobacco, in form of infusion, proved entirely successful.

Diuretics in general have so long been employed with benefit in dropsical affections, that it should become desirable to increase medicines of this class, after having learned

to exhibit with advantage those already known. We therefore, hold in high estimation this plant so evidently endowed with the power of speedily evacuating accumulated serum, by a natural discharge. As a diuretic it may be administered as a tincture, prepared from the leaves, first rendered crisp by means of heat. It has also been given in substance, powdered, and even as ashes.

In dysuria, or retention of urine, it has been successfully employed. By some it is given in infusion per anum, while others prefer it as a cataplasm applied to the perineum. The good influence is exerted upon the muscular spasms of the neck of the bladder, permitting its contents to be evacuated. In these instances it may be termed *a local diuretic.*

Emetic. That it possesses emetic properties, nearly all are ready to testify, who for the first time assumed its use. It is probably in consequence of its emetic action, when taken into the stomach, it is so seldom administered in this way; and hence it is usually exhibited either as enema, by inhalation, or employed externally. It is however given as an emetic in form of snuff, five or six grains composing a dose. An instance is related of arsenical poisoning in the person of a lady, to whom, in the absence of other remedies, a quid of tobacco was speedily administered. Violent emesis ensued and the patient recovered. The tobacco itself may have some power to counteract the deleterious effects of the poison, but I am of opinion, the immediate vomiting saved life. However, some authorities believe something antidotal to arsenical poisoning exists in tobacco. Dr. Mitchell, of Jeff. Med. College, believes that when tobacco comes in contact with arsenious acid, a *tertium quid* is the result; a sort of compound poisoning, in which the original poisonous qualities of both articles are lost. It has long been a prevalent custom to expose a burnt part to the radiation of heat or to hot lotions, and the success is often signal. Shakspeare alludes to the practice and to the fancied law of the economy in his "*Romeo and Juliet:*"

"Tut man! One fire burns out another's burning;
One pain is lessened by another's anguish:
Turn giddy and be holp by backward turning,
One desperate grief cure with another's languish.
Take then some new infection to thy eye,
And the rank poison of the old will die."

The Portugese, among many other virtues which they attribute to tobacco, have classed it as a *counter poison*, hence the appellation bestowed—"Herba Sante."

The leaf soaked in hot vinegar and laid to the epigastrium, has procured prompt emesis, and may well be resorted to, when other emetics cannot be taken into the stomach.

Cathartic. In cases of obstinate constipation, it has been found valuable as a cathartic, inducing immediate expulsion of all indurated matter. "The smoke," says Dr. Cullen, "thrown into the rectum, often proves successful after the failure of many violent cathartics." The advantage is, that it enters much higher into the intestines than injections commonly do, and is therefore applied to a larger surface, wherefore the effect is more powerful than that produced by liquid injections generally. It is much to be regretted injections of tobacco are not in more general use, the utility of which in severe cases of colic, constipation, &c., far exceeds that of most other remedies. We have the high recommendation of Prof. Wood, who strongly urges its employment in cases of obstinate colic, ileus, constipation, which have resisted the ordinary remedies for relief, and in especial, when attended by spasms of the bowels. It is also well spoken of in form of cataplasm to the abdomen in *Colica Pictonum*, and generally produces the desired result in a short time. Free alvine evacuations ensue, and the relief from all pain is prompt. The poultice, moreover, has several advantages over all other modes of exhibition, being more easily applied and more readily controlled, rendering it therefore, decidedly *the* safer mode.

Errhine. The powder known as snuff has long been in

The Diseases of Davidson County.

Read before the N. C. Med. Soc., at its Annual meeting in Morganton, May, 1861,

BY R. L. PAYNE, M. D., OF LEXINGTON, N. C.

Within a few years past a complete revolution has taken place in regard to the character of the diseases of Davidson county. Formerly our physicians had to contend almost solely with diseases originating from malaria; in fact, the mystic god of malaria (if I may use such a figure) held supreme sway, and we very seldom met with diseases of any kind, but what were stamped, more or less, with this unmistakeable impress. But during the last four years, it has been a rare thing to meet with diseases of a malarious origin. We now have a much sterner, more unrelenting and more insidious foe to deal with in the form of Typhoid diseases. Where is the physician who (after having had some experience in the treatment of diseases of a typhoid type) is not forced to admit, that in them at least, he has met with a foeman worthy of his steel.

Typhoid Fever has prevailed to a greater extent during the past four or five years in our country, than any other disease.

I do not think all parts of the county have been entirely free from its ravages at any time for several years. When it first made its appearance amongst us, our physicians being used to the treatment of Intermittent and Remittent fevers, were not prepared for it, and it proved a most fatal malady under their active treatment. Some of our physicians were even heroic enough to bleed, and consequently unfortunate enough to lose their patients. I am willing to admit that cases of Enteric fever may occur, and I can conceive of such, in which the use of the lancet may be admissible and even necessary; we have high authority for such a practice, but my humble opinion is (after some experi-

ence in the treatment of it) that general bleeding in typhoid fever is heroism merged into the very extreme of rashness, and I have never yet met with the case in which I have been able to "screw my courage to the sticking place." Cathartics were used to a very great, and very injurious extent formerly, and even now the weight of authority is in favor of the use of laxatives in this disease, which in my opinion is bad practice in the majority of cases, such as I meet with, for it is not unreasonable to suppose that the inflamed and ulcerated glands of Peyer and of the mesentery are made worse instead of being benefitted by cathartics or aperients which increase the pristaltic action of the bowels, and irritate directly by producing a more constant passage of fecal matter, and it is my confirmed belief that we might with just as much propriety, attempt to heal a fractured limb without the use of splints and rollers as to try and effect the cure of these inflamed and ulcerated patches by irritating and keeping them in continual motion by active, or even moderate purgation. In almost all cases diarrhœa exists, and in the majority of those in which it is not really present, we all know the bowels are very susceptible to the action of cathartics, and the great danger is of producing hyper-catharsis. Those cases have done best in my practice in which I have been able to restrain the bowels to one, two or three actions a week. I am thoroughly convinced that the use of the Oil of Turpentine has been a greater source of evil than of good in the treatment of this fever, and more cases have been injured by it than have been benefitted, simply because it has generally been used indiscriminately. It is applicable, and is a great remedy in some cases, but in the majority of those we see, modified as they are by our southern climate, it will not do; at least, such is my experience. The treatment which has been most successful in my hands, and which is, in the main, that pursued by our physicians, is the following:

When first called to a case, if the bowels are not already sufficiently open, I administer a mild aperient or enema—

great repute as an errhine. Its use is frequent, and has received high encomiums as a remedy in headaches, pains of the ear, and opthalmia. How far its effect may extend, cannot exactly be determined, but probably it influences to greater or lesser extent, the whole encephalon. A belief generally entertained, that serious results threaten when the Schneiderian membrane becomes dry, points out the necessity of restoring the mucous discharge if possible. Here errhines will be of avail, of which tobacco is most prompt and reliable. A case is related in which tobacco was employed with marked benefit by a lady who was afflicted with violent headache, accompanied by the sensation well known as *stuffing in the* head. Many remedies were proposed and tried, but ineffectually. A physician was called in who prescribed snuff as a sternutatory. It produced violent sneezing, and the ejection from one of the nostrils of a plug of hardened mucous, nearly an inch long, after which she experienced relief, and immediately recovered. The result may be borne in mind with advantage, as it may attract attention to a cause of headache, that might otherwise be unsuspected.

Anthelmintic. The fumes of tobacco injected into the rectum have been highly valued in dislodging Ascarides. Poultices applied to the abdomen have also been beneficial in destroying and causing to be expelled worms from the alimentary canal; and sympinternally administered has been highly recommended. Injections of the decoction thrown up the nostrils daily for a week or ten days, have caused the expulsion of worms from the nose which had occasioned offensive discharges and severe suffering to the patient. At first the injection was very painful, but in a few days it became more endurable, and all fetor was completely corrected. Several of the most powerful medicines, whose virtues as vermifuges are held in great repute, sometimes fail; and in such instances the powerful influence of tobacco may be resorted to. It deservedly merits medical attention, and should be tried in all cases, which

may have resisted the more feeble operation of other anthelmintics.

Having thus treated of the many diseases incident to mankind, in which the exhibition of tobacco has been found so useful, I may, in conclusion, be permitted to remark, it is to be greatly deplored its consideration has been so little attended to by physicians, who have been led to deprecate the worth of a medicine (whose benign influence in eradicating disease, has in many instances been evidently confirmed) by the deleterious properties with which it is endowed, and the supposed dangers of exhibiting it on this account. Its baneful effects either in its abuse or excessive doses, should by no means dissuade its employment as a Therapeutical agent. Powerful medicines are always among the best, and are only rendered injurious in the hands of timid, injudicious or ignorant practitioners. The invaluable aphorism—"Poisons in small doses are the best medicines, and the best medicines in too large doses are poisonous," merits, in this instance, our attention.

zinc given by mouth, and assisted with astringent and anodyne injections, together with proper dietetic regulations, confinement to the recumbent posture, avoidance of all liquids, &c., &c. Cases of this disease among adults yielded very readily to treatment.

In the summer, fall and winter months of 1860, an epidemic of yellow jaundice prevailed in Davidson, and several cases have been seen in 1861. I do not think I exaggerate when I say, that during the months of July, August, September and October, we had at least three hundred cases of jaundice in our county. For several months it was confined to a comparatively small extent of country, but gradually spread until hardly any part of our county was entirely exempt. There was nothing peculiar in this epidemic to distinguish it from jaundice as it occurs sporadically. What was the cause of it can only be conjectured! May it not be that the sudden vicissitudes of weather, together with some local cause, might have given rise to it, and may not the local cause have been malaria again lurking around her old hiding places in Davidson; and further, may not this epidemic have been a forerunner to warn us of the re-appearance of Intermittent and Remittent fevers in our midst? If it was entirely dependent on a local cause it was an endemic, and not epidemic disease.

Our physicians differed in regard to the treatment of it. Some of them believing in coaxing the liver by alterative doses of calomel or mercury in some form, while others of us hit him (the liver) a good lick with from 15 to 25 grains of calomel, given at bedtime and followed in the morning with castor oil, and after one or two large doses, we either gave it in alterative doses, or gave the nitro-muriatic acid together with the bitter tonics, alkalies, &c. Quinine proved useful in many cases.

I have no hesitancy in saying that I greatly prefer calomel in large doses in epidemic jaundice, because in the treatment of seventy cases, I gave both plans a fair and impartial trial, and I am thoroughly convinced that those cases

treated with large doses did much better, and recovered sooner, than those treated in the opposite way.

We had, during the winter and spring, a goodly number of well-marked cases of Diphtheria. The first case or two which occurred were past hope before medical aid was called in, but since then the people of Davidson have become alarmed on the subject, and the mortality has not been very great. We treat these with muriated tincture of iron and solution of chlorate of potash internally, and apply locally a solution of the nitrate of silver from 30 to 80 grains to the ounce. We give some cases stimulants and feed all well, and this shall be our treatment until convinced of a better. There are many other of the "ills which flesh is heir to," common to Davidson county, and about which a great deal more might be said, but I will desist for fear your patience and forbearance be worn entirely threadbare.

Letters From S. S. Satchwell, M. D.

PARIS, February 20th, 1861.

CHARLES E. JOHNSON, M. D.—

Dear Doctor: France, with a population of nearly forty millions, and a medical profession of unrivalled professional devotion, has only four medical schools, while our own country contains some fifty, if I mistake not. The great Metropolitan school is, of course, situated here, and the remaining auxiliary schools are at Strasburg, Montpelier, and Lyons. Within the last year or two no one can enroll his name at these Medical schools as a pupil, without presenting two Diplomas—one of Bachelor of Arts, and the other of Bachelor of Science. But we take into our offices as medical students, and our Colleges graduate them as Doc-

the latter of which I greatly prefer—but more frequently I am compelled to use opiates and astringents to keep the diarrhœa in check. For this purpose I am in the habit of using a solution of the sulphate or acetate of morphia in the milder cases; but in the more severe, a combination of opium and acetate of lead to be given every two, three or four hours, as the case may require. In the very outset of the case I prescribe a saturated solution of the chlorate of potash, of which the dose is a teaspoonful every three or four hours as long as the diarrhœa continues. I am not able to say what is the peculiar "modus operandi" of this salt, whether it acts indirectly through the blood, or directly upon the ulcerated glands of Peyer: one thing I do know, however, since it has come into general use, the mortality has been far less, and hemorrhages have been less frequent in my county than they were formerly in this disease. If the patient is restless and complains of want of sleep, I give him solution of morphia, lupulin, or something of the kind, for sleep is absolutely necessary in these cases, and if there is delirium or any tendency to it, the head should be shaved, and cold, or warm application kept to it, as may be most agreeable to the patient. In fact, I think all cases of Typhoid Fever do better to have the head shaved, whether there be delirium or not. The patient's linen, &c., must in all cases be often changed, and his room should be large and well ventilated. I direct my patients to be sponged frequently with cold, tepid or acidulated water as is most agreeable to them, and I believe this simple remedy highly serviceable. I also allow them the free use of iced and acidulated drinks.

About the second week of the disease, and sometimes much earlier, I begin the use of stimulants and tonics—as a stimulant, I prefer to every other good home-made brandy or whiskey, and as a tonic I prefer the infusion of serpentaria, though quinine answers a good purpose in some cases. These I prescribe "*pro re nata*."

If hemorrhages supervene I give large doses of sugar of lead and opium, more especially in hemorrhage from the

bowels, from six to ten grains of sugar of lead, combined with one or two grains of opium and given after every bloody stool, has seldom failed to check the most alarming hemorrhage, and I have never seen any evil result from such doses, but could adduce numerous instances to show their marked benefit. Blisters over the abdomen I consider of the utmost importance, more particularly over the right iliac region, and I frequently re-apply them with advantage. Meteorism yields more readily to assafœtida given in pill or by enema (in my cases) than to any other remedy. The diet, I think from the beginning should be nutritious, and after the second week, or sometimes sooner, I advise good rich soups of mutton, beef, &c., &c.

I may be a little *ultra* in my views respecting the treatment of this disease, but who can blame me for it in this age of ultraism, since it is the habit of every man to think and act as he pleases, and since, if I am I owe it solely to the teachings of what little experience I have had with it, and I would not now exchange the teachings of experience for those of any other school. I believe in giving nature a fair chance. I believe there is such a thing as the "vis conservatrix naturæ," notwithstanding very many in this age scout at such an idea, and I believe that the tendency of most cases of fever is to recovery, and can be greatly assisted by the physician, but at the same time I am sure many a hapless individual has fallen a victim to the "nimia cura medendi," and perhaps as often in typhoid fever as in any other disease.

During the last spring and early summer months of '58, '59 and '60, dysentery prevailed in an epidemic form. In 1858, it presented itself in its most malignant type, and proved most fatal among young children. I know of no disease which more effectually baffles the skill of the physician than this disease occurring in young subjects, and I cannot confidently recommend any plan of treatment as infallible; that from which I derived most benefit was opiates combined with alum, sugar of lead, or sulphate of

tors, men who have never been through the elementary spelling book, nor ciphered as far in Daboll's arithmetic as the good old Rule of Three. The whole number of medical students attending lectures each year at these French schools average about two thousand. How many there are every year in attendance upon our hosts of Medical Colleges and how many graduates they annually turn out upon the body politic, I shall leave for you to figure up for the benefit of our readers. Here the supply is only equal to the demand, and the profession is not degraded by the ignorance and demagogueism of ambitious medical demagogues and pettifoggers; but doctors are licensed by government upon the recommendation of an able and impartial profession.

In America, the supply far exceeds the demand, and the Colleges have prostituted the profession, and caused an American Medical diploma in Europe to be regarded more as an evidence of reproach and ridicule than as a mark of merit and capacity in those holding it. It causes me to feel chagrined when I thus see an American diploma, regarded as so much waste paper, and you need not then wonder that I should continue an advocate of American medical reform. No man can practice medicine or surgery in France without he has a French Medical Diploma, and no man can get that diploma without studying seven years and sustaining an approved and searching examination before an impartial tribunal. So that the croakers at our North Carolina Medical Board of Examiners, an institution entitled to the support of every good man, would find but little sympathy here in their opposition to this professional necessity. They would find the doors, to practice here, closed against them, not more by professional sentiment than by a due appreciation in the community of health and life. Though the time required here for study and Hospital service extends to seven years, many are nevertheless unable, even then to graduate, so trying is the ordeal of the examination, and have to be rejected or put back for longer study. But in our country a man can graduate in medi-

cine at short notice and without any other qualification than the payment of his lecture fees, even if his time of pupilage is passed outside of college walls, in extravagance and dissipation. Here he is examined thoroughly at stated periods during his whole course, and no royal blood nor family influence can secure his diploma, but he must rely alone upon scientific attainments and intellectual strength. And the same holds true in relation to the filling of any medical vacancy of honor or profit in the various Hospitals, Medical schools, or other public institutions.

It is all done by a system of *concouring* which gives to the poor and obscure the same chance and rights as the wealthy and influential. Our boasted republican system, as practised in our public medical institutions, generally departs from this true and just policy and dispense their honors and profits from less worthy motives. With us kissing goes by favors and by considerations connected with popular elections. Such dispensations are made from calculations of wealth and political qualifications, and in a vast majority of instances, merit and intellect are ignored. I am running this brief comparison more in sorrow than with pleasure, knowing that in most cases truth does more good by being told than suppressed, and hoping that every drop poured into the rising tide of medical reform at home will not be without its weight in aiding to suppress the prostituting influences of our system of medical education, so prolific of medical nuisances. A physician here has no need of even putting his name over his office door or on his door of residence. He merely announces that a graduated Doctor can be had within, and this is as good a passport to public patronage, under the operation of the system here recognized, as if surrounding himself with all the captivating paraphernalia of our most showy practitioners, whose means to secure practice, would, in fact, if attempted in Paris, consign them to shame and disgrace. The attempts of American physicians sometimes made here to catch the popular breeze by showy means more popular elsewhere

only excites the laughter and ridicule of the community and the neglect of the profession. However fond of gayety and of glory and of war the French people are, it is equally true that they will not confide their health and lives to the treatment of incompetent medical men. The French government, directed by that extraordinary man, Louis Napoleon, places a proper estimate upon human life and comfort in all its relations to the medical profession; and the Emperor is constantly developing plans for the encouragement of medical science, and the comfort of the sick, with an energy of purpose and a minuteness of detail that is most useful and gratifying. I should be glad to see our own government and laws enter more heartily into this great work, and our own people rising to a higher appreciation of its importance and necessity.

The remark so often made by the ignorant and designing that quacks and quackery flourish most where medical science has most advanced, is incorrect. Paris is in proof of what I say. Quacks there are here, of course, because they are a part of that great humanity which spreads itself over the whole world. But I am convinced that they are comparatively more few in number and make less in proportion than in any other city. The celebrated quack negro doctor who flourished here a number of years ago with his panacea for cancer, and who was allowed to practice by special enactment, was at length arrested for malpractice, and is now expiating his crimes in hard prison labour as the reward of his rascality and destruction of human life.

It has been said in support of our existing system of manufacturing doctors that it is unavoidable, as the large majority of our medical students are poor and unable to make a greater outlay of time and money in preparations for practice. If the remark be true then, such men should never enter the profession because all admit that human health and life should not be confided to incompetent hands. But it is not true. My own observation teaches me that the great mass of our medical students are superior in pecuniary re-

sources to the French students who have to support a long apprenticeship of seven years before commencing practice, even after a diploma of art and science previous to commencing medicine. The dress and habits and manner of living of the throngs of students who daily occupy the seats of the lecture rooms here are evidence of this. I know of scores of medical students here who are toiling on in poverty from year to year, compelled to subsist, a great many of them, on from fifteen to twenty five cents a day. It is more the luxury and idleness and extravagance of our young men than their indigence and necessities that are filling the profession to overflowing with inefficient members.

I have before referred to Chassaignac, and to the Hospital Laraboissier as a favorite among the valuable Cliniques, medical and surgical, of this wonderful city. You will remember Chassaignac as the inventor of the Ecrasseur, which was introduced into our country a number of years ago. If, like many of the French physicians and surgeons he has his crochet, and like so many others carries a favorite idea to an extreme, and thus sometimes becomes too enthusiastic in its praise, and too promiscuous in the application of what in its place is really a good and practical instrument, we can pardon him; for to see him as I have today, remove the entire tongue, hemorrhoidal and erectile tumors, and amputate the neck of the uterus, not only speedily, but without the loss of a drop of blood, covers a multitude of heterodoxies. Its construction and operation is simple. A kind of metallic chain, with short but solid links is thrown around the base of the tumor or by the aid of a trocar and canula carried through any of the soft tissues. By a simple mechanism, the arc described by the chain is gradually lessened, and the tissues enclosed by it are separated by the force of the pressure. No ligature is needed in operating, as the passage of the chain through vessels causes such a retraction of the coats as renders the ligatures unnecessary. I believe that in operations upon parts where the eye cannot well reach, as in those about the

tongue, rectum, &c., this ecrasseur is an instrument of great value

Chassaignac's "drainage," is a revival of the old doctrine of the seton, as his opponents, though denied by himself, contend. With a long or short trocar, according to the parts diseased, he plunges it, lined with a canula, through the abscess and out again through the integument. With the simplest arrangement no injury can be done to the vessels and nerves involved. Withdrawing the trocar, he passes through the canula left behind, a tube of india rubber, perforated with holes for the escape of matter and ties the two ends together. Thus the serum or pus gradually escapes, the parts collapse as the matter is poured out, and the introduction of air is prevented. He bases the value of his "drainage" upon its ability to exclude air, holding, as he does, the theory that the admission of air into abscesses causes a decomposition of pus which, acting as a poison is absorbed into the system, giving rise to depression of the vital forces, irritation and hectic fever, &c. Nelatin, the best surgeon here, uses this "drainage," and this is a high endorsement. On the other hand, there are those among them, that excellent surgeon and learned critic, Malgaigne who deny that the contact of air with pus causes a new formation that can injure the system, and therefore, such men reject the practice of Chassaignac. When we consider the danger of opening large abscesses in depraved constitutions or in delicate and scrofulous subjects and their tendency to spread and to burrow into the bones and other hidden places of the organization, and thus, in their many liabilities to destroy life, we cannot fail to hail with approbation any new method likely to be the most successful in curing them and in saving life.

Yours, &c.

S. S. SATCHWELL.

PARIS, March 15th, 1861.

CHAS. E. JOHNSON, M. D.—

Dear Doctor: You are aware that in the diagnosis and treatment of diseases of the respiratory organs, the French physicians are justly entitled to a high rank among the foremost. For its progress in this direction, the medical world owes much to the French ever since the days of the immortal Laennec. Trousseau, who is certainly a great man, Bouilland, the immediate successor of Laennec at the Charity hospital, Piorry, Barthez, and others of fewer years, are men of distinction, and are shedding a halo of light upon the important branch of thoracic diseases. From these sages and their predecessors here we have learned, not only to observe the physical signs, which as an important auxiliary means in diagnosing thoracic and abdominal disease, no reasonable practitioner now hesitates to accept, but they are also entitled to the credit of enabling us to appreciate at an early period that hetorological deposit in the pulmomonary tissue, and that antecedent state of mal-assimilation and diminished organic vitality, well known as precursors of tuberculous formation. Thus it is that in tuberculosis, prior to any extensive formation and deposit of this obnoxious matter, we are able to discern, like skilful navigators, the approaching storm, and to seize upon the precious time in combating its fearful attacks.

It is contended here by high authority that among the means efficient in arresting the approach of phthisis pulmonalis, as well as in the cure of other less inveterate and chronic affections of the throat and chest, inhalation should be used. It is known that in our country, such quacks as Hunter pretend to use it with an air of mystery and intrigue peculiar to that class of medical vampyres; but they do it without a correct appreciation of the principles of its application, or the circumstances of the cases requiring it. But because the quacks use inhalation is no good reason why

we should refuse to do so or to apply any other good remedy whenever it is supported by good argument and reliable authority. Among the regular Parisian practitioners who prize highly this method of treatment, may be named M. Piorry, to whom I have already referred. The following case has recently come under my observation in the service of this experienced physician at the Charity hospital:

B. aged 19 years, a cook; born at Paris, of medium height and lymphatic temperament, had been troubled with a cold for the last four winters. His cough was not very troublesome and without expectoration. During the past winter he was attacked with other grave symptoms. His cough had become harrassing, particularly at night; expectoration abundant; loss of flesh and appetite. On examination, M. Piorry observed the following condition: percussion dull at the apex of both lungs; the right to the extent of three inches anterior, and the left less. Auscultation indicated a diminished respiratory murmur with slight broncophony over the apex of the right lung, and prolonged expiration over the left. The patient was immediately submitted to the treatment which M. Piorry employs in similar cases and of the efficacy of which he claims overwhelming proof. The result of this case certainly corroborates his views. The treatment consisted in the daily inhalation of the vapor of iodine disengaged at the bottom of a suitable vessel with a large mouth. Internally, ten grains of iodide of potassium three times a day. Diet eminently reparative with strong wine. Some preparations of cinchona every morning, with iron reduced by hydrogen at each meal. This treatment has been used for two months, and the patient is much improved. He has been able to resume his usual occupation, and his health is now pretty good. The density of the right lung has almost disappeared; his cough is no longer offensive; and his flesh and strength is restored. The objection which some might raise that it was not so much the inhalation of iodine, as the other means used that did the good work,

M. Piorry would consider groundless. He always combines the remedies, however, indicated in this case. But his experience of thirty years in hospital practice, leads him to place great virtue in the doctrine of inhalation, not only in bronchial affections, but in goitre, and in general diseases of a chronic, scrofulous, and tuberculous character.

In connection herewith, I must tell you of a new instrument, that among the many new things introduced into the profession, has lately become a candidate for professional favor. I refer to the *Laryngoscope*, for exploring diseases of the throat. It is a German instrument. It consists of an ingenious arrangement of reflectors by which a concentrated ray of light may be thrown into the throat, and the organs of the larynx brought admirably into view. Lectures upon diseases of the larynx, with instructions as to the use of this instrument have been recently given here. The invention necessarily brings with it an increased devotion for the study of the diseases of the larynx. The objection, held to a recent period, by great men on both sides of the Atlantic, that no man ever had, and never could, reach down into these hidden parts, is giving way by the experience of even awkward manipulators. A laryngean *porte caustique*, somewhat like Lallemand's *porte caustique* for the urethra has been lately presented to the Academy of Medicine and seems to realize the essential requirements. When it arrives in the larynx it opens by a slide, allowing free use to the *porte caustique* in the revolutions. There are, of course, some who do not approve of this instrument. In view of the opposition which every new theory and invention meets with this is not surprising. Men of antiquated views, and who are too indolent to study or too bigoted to change before the triumphant march of science, are not apt to fall into the current of innovation however rightly it flows. Auscultation and percussion were a long time sneered at though their utility is now universally recognized. The opthalmoscope, so valuable in diagnosing obscure affections of the eye, was bitterly opposed at first, but now its intrin-

sic merits have swept away all resistance. I even saw my teacher at the Charity hospital a few days ago pronounce that a patient had Bright's disease of the kidneys, by no other means used than a careful examination of the eyes with the opthalmoscope; and the result of the autopsy, the case resulting fatally, proved the correctness of the diagnosis from the solitary revelations of this instrument. The appearance of albumen in the urine by adding nitric acid, of course was seen before death, but the test was not applied until after the responses of the opthalmoscope, indicated Bright's disease. The microscope has also had a heavy opposition to meet, and even Velpeau and others, who are living more in the past than in the present, raise their voices against its indubitable conclusions, though the resistless requirements of the age do not recognize a practitioner as at all up with the times who does not use the microscope in his daily practice. The uterine speculum has had a yet more unrelenting warfare to fight from those whose prejudices antagonize light and reason And yet so triumphant and unscathed are its advocates coming out of the conflict that there are now comparatively few who will so far do violence to science, and so much injure their own reputation as to condemn it in intelligent communities.

The important part, physiological and pathological, which the uterus plays in the female economy, meets with a wise appreciation here, and consequently to a skillful treatment of its numerous maladies. They are not afraid of this organ here. They probe to the bottom of its troubles and the causes and effects, whether plain or obscure, immediate or remote, are scanned with a carefulness and comprehensiveness that show what remarkable advances are being made in uterine pathology, and that the French are not behind in attaching due importance to the varied and multiplied forms of diseases of this important viscus. No intelligent practitioner, who loves his profession, can reside here long and fail to perceive to its full and sorrowful extent, that the objections so often raised in our country to the

use of the speculum and to uterine applications are as strange as they are certainly groundless. He will soon discover that they are indicative more of a spirit of retrograde than of progress, and that whilst thus imposing obstacles to useful science, such medical objectors are robbing humanity of its brightest charms and hurrying many a lovely female to a premature grave by parading before her sensitive nature the deceptive shadows of false modesty and erroneous conclusions that are as unworthy of a gentleman as they are destructive to human health and happiness. Not that the French physicians advocate an indiscriminate use of such local means of diagnosis and treatment. On the other hand, they are very discriminating in their use. In the case of the uterus they are governed in their course by established principles of disease. These principles are based upon the fact that as the structures of other parts of the organization, homogeneous to the uterus, are to be treated when diseased, both locally and generally, when admissible, so there is no good reason why the uterine diseases should not be treated according to the same acknowledged principles, and not in accordance with the suggestions of a false taste and squeamishness that should never be placed in the way of human health and life.

The thousand and one varieties of mechanical means for supporting the womb and regulating its displacements are generally ignored as productive of more evil than good. More radical means are used. A careful examination is made of the general system and the history of the case and the actual pathological condition of the womb and its annexal is ascertained; and then by local and constitutional means, efforts are made to remove the cause and not simply to treat its effects. This often leads to the treatment, legitimate here, of making with impunity, injections into the uterus, and of making, by suitable means, applications of nitrate of silver and other remedial agencies, not only to the mouth and neck, but also to the body of the organ through its cavity. Thus are uterine disorders cured—old

chronic affections removed, that may have resisted less efficient means for years. And when these efforts fail, the same parts are reached by delicate instruments expressly made for reaching the surfaces and cavities of invisible and hidden structures, and for applying remedies to them. Granulations upon the mucous surface of the neck and cavity of the uterus, so often obnoxious to treatment, and in so many cases wearing out the health and lives of female sufferers, are treated here with marked success in this way. The granulations are excised and the way paved for other local and general treatment. In the diagnosis and management of displacements, metrites, indurations, ulcerations, &c, &c., the French physicians are wide awake, and with the love of science and of glory which distinguish the professional men of France, they seem determined not to be outstripped by the profession of any nation in the diseases of women, as well as in any other branch of the profession.

But I have been often surprised at the ignorance here of the views and operations of our American physicians and surgeons. For example, in an operation for the exsection of the inferior maxillary bone performed a few days ago at the Petit hospital by that bold surgeon and dashing operator, Maisonneuve, he proclaimed himself as the first who had performed that operation, whilst the truth is that our own Mott, of New York and other distinguished American worthies had done it successfully before Maisonneuve was born. Again, in the interesting and eloquent course of lectures which Trousseau has been giving this season at the Hotel Dieu, he remarked, in speaking of yellow fever that in death from that disease the liver almost invariably presented a morbid condition peculiar to that fever. This I take it is contrary to the views of our southern practitioners and will not be supported by the pathological statistics of yellow fever in the south. When he made the remark, I chanced to be sitting by Dr. J. Morrison, a talented and rising young surgeon of Lousiana, now sojourning in

Europe for professional improvement, and he observed, that during five years service in the New Orleans hospitals and alms houses, he had examined more than five hundred cases of death from yellow fever, and in very few cases had he been able to detect any such anatomical lesion or pathological condition as claimed by Trousseau.

The prices paid here for medical services and surgical operations are such as would cause many of our grumblers at doctor's bills at home to cease their complaints and consider themselves as fortunate, if they could only see the French tariff of charges. A large number of the profession get immensely rich by their practice. Nelaton makes forty thousand dollars a year by his profession, and is now probably the wealthiest surgeon in the world. Next to Nelaton, about in the order I name them, comes Trousseau, Jobert, Rayer, Andral and Velpeau. Velpeau, who came here a poor blacksmith, has made by practice, a fortune of about a million of dollars. I learn from a source entitled to credit that he has become inordinately selfish and penurious in his old age. He manifests at times an unreasonable opposition to the inventions and improvements of younger members of the profession whose progress and exploits are about to overshadow his own reputation, based more upon great experience than upon shining qualities, personal or professional.

I regret to announce to you the recent death of Aran. He was a young man of great practical ability and a brilliant writer and lecturer upon diseases of women. He has died too early for the good of science, and the profession are everywhere mourning his loss.

Yours, &c.

S. S. SATCHWELL.

SELECTIONS.

Practice of Medicine.

On Fever and Inflammation.

BY J. L. TEED, M. D. OF MENDOTA, ILL.

Next to the various processes of healthy nutrition, fever and inflammation present the greatest interest both to the physiologist and pathologist—they enter singly or conjoined, into nearly every condition of disease; primarily or by their results, they lay by far the larger portion of civilized humanity in its grave; they meet us at every turn, and present themselves under nearly every phase; it is no wonder, therefore, that from the earliest days they have engrossed, and still continue to engross so much of the attention of physicians.

Yet these processes are even still mysteries. After all that has been said and written about them, and the innumerable disputations, how little has been reduced to the certainty of science, and what a vast portion of our fancied knowledge still remains hypothesis or conjecture!

Whence the cause? Partly the very difficulty of the subject, and its intimate connection with the processes of life, themselves so little comprehended; and partly because physicians, while yet ignorant of the natural workings of the healthy body, having observed a few more superficial facts of its diseased conditions, have immediately framed hypotheses by which to explain them; when each observer meeting some variances in the facts, and finding some dis-

crepancies in the hypothetical explanations of the others, has thought it necessary to rebuild the whole fabric from the foundation; thus hypothesis has been piled on hypothesis, until the student in sheer bewilderment sides with one or with another, without knowing exactly why, and then declares his party the true faith, and brands all others as heterodox or heretic.

These conditions have many things common to both, as well as peculiar to each. Their very names exhibit one of their connecting circumstances—increased heat; in inflammation this is local, in fever general; the part *inflammat*, the whole *fervet;* they arise also from a common cause, therefore they are seldom met with separately, for inflammation is scarcely ever present without fever, and fever, unless periodic or febricula, is seldom observed free from all inflammation; and indeed several pathologists have declared fever to be an inflamation, some of one organ, some of another. Either one, however, may be the primary or the secondary disease. They differ principally in that inflammation is essentially a local disturbance, while fever is a general derangement—inflammation, while consisting of a nervous as well as a vascular element, is yet more particularly seated in the organic tissue itself, starting from which as a centre, it may implicate the whole frame—so as to have been declared a preverted nutrition; while fever has no local habitation, no fixed point of departure, but from the very commencement seems to be a general disorder of the whole organic functions. In inflammation the peculiar product is an excess of fibrin, in addition to the varied results arising from the affection of different organs; in fever the tendency is to a diminution of the fibrin and of the red corpuscles, the results of a general derangement of the secreting functions being added.

Pathologists have endeavored to condense these processes into that *multum in parvo* a definition; but from their complex nature, this attempt has been generally a failure. Galen described fever as *calor præter naturam*, and Virchow writes,

"fever consists essentially in elevation of temperature, which must arise from increased consumption of tissue, and appears to have its immediate cause in alterations of the nervous system." Copeland had previously written, "that the morbid impression (producing fever) is first made upon the organic or ganglial nervous system, and owing to the circumstances of this system actuating the circulating, secreting, and excreting viscera, is manifested in an especial manner by the changes observed in the state of vascular action, in the animal temperature, in the functions of secretion and excretion, in the circulating fluids, and in the other functions which are more or less intimately dependent upon the ganglial system." Virchow adds, "Every disease may become febrile, every disturbance may form itself into a fever if it extend itself to the centres which regulate the waste of the tissues, and the proper moderating power of the tissue metamorphosis is suspended."

Dr. Southwood Smith observes, "that the order in which the morbid actions, which constitute fever, occur, is first, derangement in the nervous and sensorial functions, this is the invariable antecedent; secondly, derangement in the circulating function; this is the invariable sequent; and thirdly, derangement in the secreting and excreting functions; this is the last result in the succession of morbid changes. Derangement in the functions of secretion and excretion never comes first in the series; derangement in the nervous and sensorial functions never comes last in the series; derangement in the function of circulation never comes either last or first in the series, but always the second in succession."

Inflammation has been defined as increased sensibility and vascularity of a part, with a tendency to morbid secretion, and consequent disorganization. Dr. Bennet defines it as an exudation of the normal liquor sanguinis, and Dr. Alison as a *tendency* to exudation.

In the number of this journal for July, 1860, I traced the histological arrangement of two of the tissues, the muscular

and the osseous, as typical of the whole, to be that of cells in various approximations having one surface in connection with a nutrient vessel of the plasmatic vascular system; both vessel and cell being filled with distinct fluids, which pass from one to the other according to their osmotic conditions; and this interchange of fluids constitutes nutrition. If, therefore, liquor sanguinis osmoses from the vessel it must be into the cell, for the wall of a cell forms a part of the limiting membrane of the vessel. One of two things may happen, the fluid may osmose too largely *into* the cells, causing over-distension of them; or it may remain in the vessels and distend *them;* and in addition to either of these, it may rupture the walls of some vessels and cells, and blend the whole into one confused mass; either of these states, except the first, can be caused only by some sudden impediment to the circulation in vessels nearer the heart, as may arise from sudden contraction of the vessels at the seat of the disorder. Should the engorgement come on gradually, a larger amount of plasma may circulate through the part, and exude largely, or osmose into the cells, but becoming organized, hypertrophy will be the result, or some other structural change, and yet be unattended by inflammation. So also an impediment may gradually arise to the circulation in a part, causing obstruction in, and osmosis from the plasmatic vessels, distending the cells, or perhaps even rupturing some vessel and cell-walls without it becoming organized, and yet be unattended by inflammation, as in some dropsical conditions. It seems to be only that local condition, which is attended by an increased formation of fibrin in the fluids, a loss of the contractile power of its smallest vessels with dilation and engorgement, and an irritated state of its contained nerves which should be considered as inflammation.

The nerve, the vessel, the ultimate tissue element, and the fluids in the part are all unitedly concerned in the production of inflammation, nor can it exist without the implication of them all; no two even of those factors can produce it.

This same histological arrangement, being applied to the term waste of tissue, naturally raises the question, what is the tissue which suffers this increased consumption in fever? If we examine closely the phenomena of nutrition, it can be only the albuminous pabulum of the blood, the similar portions of the cell fluids, the blood-corpuscles, and the adipose deposits in the body, for we have no evidence that the cells, whether muscular, nervous, osseous, or other, are broken up and carried away, but the contrary, unless the forming of fresh Haversian systems in bone be considered such a removal of cells, although it may admit of other explanations. If this increased consumption were a result of a natural or healthy cause, it might be replaced by an increase in the food, as happens in increased exertion, &c., &c.; in fever the increased consumption is accompanied by a diminution of the appetite, and with impairment of the assimilating functions. But while there is an increased consumption, there is no increase in the amount of fibrin contained in the blood, unless some local inflammation be conjoined with it.

We may thus see the important differences between these two processes arising from their elementary composition, and extending through all their relations, treatment, &c., &c. Increased heat is a sympton of both diseases, but its production, as much as that of fibrin, remains an unsettled question; it is chiefly the result of chemical decompositions and oxidations; while the friction of the blood against the vessels may assist in its formation, as also may nervous currents, as is the case with ordinary electricity—however any increase in the quantity of blood circulating through a part will elevate its temperature, and an acceleration of the general circulation is more frequently attended with the same result, if not invariably so—the local increase in the circulation attends always in inflammation, the general as constantly in fever—and to moderate this activity of the circulating system has been a constant desideratum in the treatment of these diseases, whether by venesection, arterial

compression, digitalis, the revived veratrum viride, or indirectly by promoting the evacuations. Inflammation as well as fever may arise from causes originating with the body, as well as those affecting it from without—while particular causes and particular differences in the individual will occasion corresponding differences in the fever or inflammation produced, and thus may arise sporadic cases of those fevers generally contracted by contagion or infection; for in such diseases the *first* case must have originated *suâ sponte;* but in all accelerated circulation and increased heat are constant factors.

Starting from the acknowledged basis, that fever is the result of an effect produced on the nervous system, two methods of treatment have been promulgated; the first is to act directly on the nervous system, and restore its equilibrium; the second is to remove the effete productions until the cause has ceased to operate, or the incited action has expended itself—the first, attempts to cut the fever short; the second, denies this possibility—in the first secernents, in the second stimulants are used as adjuvants; of course the main stay of the treatment being the reverse. And notwithstanding the intrinsic differences between them, the same theory and plan of treatment have been adopted by either party in regard to inflammation.

There are many objections to the general use of the means with which we are at present acquainted, that exert a powerful influence on the nervous system; they do not act on all alike, and they are not always controllable in their action—instance the different effects of morphia, strychnia, digitalis, prussic acid, &c., on different individuals.

The second plan limits the formation of effete matter, counteracts its influence while it remains in the system and constantly promotes its removal.

The first method is exemplified in the cure of periodic fever, where a powerful stimulant taken shortly before the accession of a paroxysm, puts a complete stop to the disease. The second plan, indeed, from its very character of

expectancy, cannot present such a striking example, but by comparing the general results of the two modes of practice in continued fevers and inflammations, they are greatly in favor of the second.

This free use of stimulants is based on the theory that disease arises always from deficiency of nervous force, either direct or indirect; it ignores the fact so strongly, and so continually dwelt on by Copland, that vital manifestations, or the result of vital forces, may be vitiated in kind as well as in degree; It looks only at the force acting, instead also of considering the matter acted upon; and forgets that with an increased tissue change, is an increased amount of effete products, which by their very presence vitiating the blood stream, produce an unhealthy condition of parts previously unaffected, while the very stimulants poured in increasing the products of decomposition, the nervous centres are reacted upon from their peripheries, organs already overworked, or unable to work from congestion receive fresh excitation, and additional local and general disorder are awakened, under which the disease and the patient are terminated together.

One argument raised in favor of alcoholic stimulants in continued fevers and inflammations, is their alleged power of reducing the action of the heart. But the action of the heart is subject to great variations in these diseases spontaneously, it will vary on different days, and even on different parts of the same day: it is, however, difficult to conceive how a stimulant, which as its ordinary results causes acceleration of the heart's action, and increased fullness in the pulse, will reduce the action of the heart while the pulse remains full, and it is not until the pulse has become *soft* as well as *frequent*, as in the latter stages of continued fever and inflammation, that the use of alcoholic stimulants has been found most serviceable.

The blood plasma circulating around every cell in the body, as well as being the vehicle of nutrient matter to them, is also the channel by which effete matter is removed

from them. In a state of health this nutrient matter is derived from a due manufacture of alimentary substances into the albuminous pabulum of the liquor sanguinis; while the effete matter is removed by the secreting and excreting organs. Paralysis of the organic nerves supplying these glandular structures, is followed by a cessation, or at least by a dimunition of their secreting function. The blood stream may pass through them in increased quantity, but the secretion is hindered, and its peculiar constituents retained in the blood. Should this be the case with only one organ, then by the principle of compensation, other organs act vicariously; when, however, the disturbance becomes general, and the secretions of all are hindered, the trouble is increased in such a degree, that life is soon terminated unless they are restored—under the second plan of treatment mentioned above, the object is, from the earliest stages, to promote the action of those organs by which effete matter is expelled, and by abstinence or low diet reduce their work as much as possible. The excreta being capable of division into two classes, the nitrogenous, and the non-nitrogenous, and the chief of the former being urea and uric acid, those remedies which have the most effect in promoting their secretion are of especial value in the treatment of both diseases, especially in their earlier stages, and liquor ammoniæ acetatis, and bicarbonate of potash, or its citrate, have descended to us as heir-looms of great value, although from the researches of Dr. Garrod, lithia and its carbonate appear to possess superior powers to them.

The non-nitrogenous excreta are derived largely from the intestinal canal; but owing to the great tendency to diarrhœa in many of these disorders, and the consequent debility thereby induced, and owing to the fact that the small quantity of food allowable may require longer time than ordinary for its digestion and assimilation, great care must be always observed in the use of purgatives, of which enemata may be in a great majority of instances the better kind; while it is essential that they act, it is also essential that they do

not act too much. In both fever and inflammation the action of the skin may be advantageously promoted. Tepid sponging with alkaline solutions, or with diluted alcohol, will be found very effectual, and contribute much to the ease and comfort of the patient. The pulvis antimonialis comp. of the Pharmacopœia, or James' powder as usually called, is by far the best diaphoretic for general use, and when combined with small doses, one-sixth or one-eighth of a grain of acetate of morphia, a little camphor, and nitrate potash when allowable, will often lull a febrile paroxysm after a few repetitions, and induce a copious diaphoresis; a calm and quiet sleep; a moist tongue, and a general improvement with a gentle increase of all the secretions.

Another remedy much used in both diseases, and in nearly all their stages and kinds, is mercury in one or other of its forms, and no remedy has been so abused by a reckless use, so much so as to have become a by-word and a reproach to the profession. It is usually given in what are termed alterative doses. This term alterative is exceedingly vague; it means everything or nothing, and justifies the saying of Chateaubriand "that words were invented to conceal our thoughts," and our ignorance, it may well be added. An alterative is a remedy which changes the character of the secretions without increasing or diminishing them. But we neither see this effect produced, nor do we expect to see it in the use of mercury in either fever or inflammation. If quicksilver or any of its preparations is digested with solution of chloride of sodium, decomposition ensues, chloride of mercury, *i. e.*, corrosive sublimate is formed, and soda from oxidation of the sodium by atmospheric oxygen, and this process is facilitated by the addition of a little blood: chloride of mercury is soluble in excess of albumen; and the double compounds, chloride of mercury and albumen, with chloride of sodium or with chloride of potassium, present considerable resistance against decomposition by oxygen. The mercury, therefore, passing into

the various cells from the blood stream in these double compounds, as it were, withdraws a large amount of the blood on the one side, and of the tissues on the other, from the action of oxygen as effectually as venesection, while the volume of the blood not being altered, the action of the heart is lessened, having to circulate that amount of unstimulating matter; and the blood itself is at the same time just so much diluted, absorbs so much less oxygen, and is consequently so much less stimulating. There is no necessity in the majority of cases to cause as much mercury to be absorbed as the system will tolerate without disturbance; for it is not until this point is reached that the particular local effects of salivation are produced, and its remedial effects are obtained previously; its approach may be easily recognized, except where the system is very impatient of this mineral; and when we wish to rid the system of it, a rapidly oxidizing agent, as the chlorate of potash, causes its decomposition and discharge.

During the formative stage, or the stage of incubation, any zymosis spreads rapidly through the whole system; while all the excretions being checked, the opportunities for its discharge are more and more lessened; in the inflammatory stage the nitrogenous excreta are increased, and remain above their natural standard as long as this stage lasts, while the chlorides are as constantly diminished, the patient discharging a large excess of nitrogen, over and above that consumed in his food; the carbon and hydrogen excreted not being so easily estimated, but they manifest greatly disordered conditions as evinced by the fetor of the breath, of the stools, and of the sweat. In this stage the circulation becomes greatly accelerated, and the pulse full and bounding, in proportion to the sthenic character of the disease. The connection between this condition of the pulse and the intensity of the disease is so obvious, and the remedy so instantaneous, that blood-letting has been the practice from time immemorial; and in incipient inflammations of a sthenic type under the diminished blood

stream, the pulse will often become soft and compressible, all the secretions will begin to flow, and the patient pass directly into the stage of convalescence. It is only when the case has been of long standing, or the cause of a specific character, or the disease too closely approximating the asthenic or typhoid condition from the first, or too apt to run into it, that bloodletting is inadmissible; but in all inflammations where the vascular element is more involved than the nervous blood-letting—while in the opposite, that is, where the nervous is more involved than the vascular—counter-irritation should be resorted to, and often with considerable freedom. In inflammation of a distant joint, arterial compression in the limb above has been often followed by good effects, the dimunition of the blood stream being in this case confined to the parts affected.

These diseases form an excellent confirmation of the correctness of Liebig's division of food into plastic and respiratory. We observe, and more particularly so in fever, how largely the nitrogenous portions of the body are removed, as evinced by the large excess of nitrogen discharged over and above that contained in the food; and also by the great amount of caloric set free in the system from the secondary decompositions thereby occasioned; while the large quantity of cold water, and often of ice, consumed is but barely sufficient to render the internal heat bearable. The food in these cases is always extremely scanty, for nature has wisely abolished the desire for it, and weak, thin broths, or whey, are generally preferred, and drinks acidulated by some vegetable acid. The carbo-hydrates and fats, more especially the latter, are extremely ill-suited to this condition of things, and if taken are very apt to produce intestinal disturbances. It has been lately objected to Liebig's view, that fat, salts, and water are as essentially components of the tissues as albumen. This objection is very superficial, for all nitrogenous food contains both fat and salt, and the animal substance void of them, gelatin and its allied substances are not, although rich in nitrogen, capable of being

substituted for them. It is not nitrogen that makes *plastic food*, that is not Liebig's point; but that food to be plastic must contain nitrogen. This by no means denies that a body may contain nitrogen, and yet be unfit for food; it only affirms, what no man has yet proved to be false, that animal life cannot be supported on non-nitrogenous food; but may be supported solely on single articles of food, as milk, flesh, bread, and that these articles, besides other things, are very rich in nitrogen; and not only are fever and inflammation in their relations to food, good examples of the truth of Liebig's views, but the more fully these views are understood and carried out by the physician in the treatment of these diseases, and of the periods of convalescence from them, the better will it be for his patients, and the less likely will they be to suffer relapses.

In examining fever or inflammation under general principles, great care should be taken not to select peculiar forms of fever or inflammations of particular organs as types of these diseases in general, by which to guide our treatment of them as a class. No two forms of fever, and inflammations of no two organs, are to be treated on any stereotyped plan; and it may almost be added, no two cases of either disease. Peculiarities of the individual, and of the circumstances are almost infinite, and will cause variations of treatment correspondingly numerous—and the laying down rules for the use of stimulants, or purgatives, or any other remedy, or the disuse of bloodletting as a constant practice in inflammation generally from a special practice in inflammation of a particular organ, or in fever, from a particular epidemic, will tend rather to reduce the practice of medicine to a shallow empiricism, than to extend its rational and scientific foundations, and plant the minds of its students and practitioners on those vito-chemical principles which deal with the body as a material reality, and its changes as real material changes; and when these are unknown will lead them, not to invent hypotheses, but to institute investigations to obtain the facts. The present

state of physiology has been attained chiefly on the foundation of animal chemistry; for although the microscope has revealed the minute structure, we have not been able to gain thereby a definite idea of the function of the part; but by learning more and more fully the chemical characters of each secretion, and by carrying the investigation into the laboratory, we have obtained information which has yielded valuable results. The same plan in pathological physiology will add greatly to them, and when observers shall take the vito-chemical stand-point, medicine will progress as a science and as an art.–*Am. Jour. Med. Sciences.*

Clinical Lecture on Abortive Measures in Cases of Typhoid Fever.

BY AUSTIN FLINT, M. D.,

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GENTLEMEN—I have chosen as the subject of my lecture to-day, a renewal of the cases of typhoid fever which have been under our observation during the winter, with reference especially to abortive measures of treatment.

Abortive measures of treatment are those employed to arrest the progress of the disease either by cutting it short, jugulating it as the French writers say, or by abridging materially its career. Up to a late period measures for these ends were employed habitually by physicians, and, as was supposed, with considerable success. Blood-letting, cathartics, emetics, mercurialization, and other means have been advocated as possessing the power of arresting the common continued or typhoid fever. But since the natural history of the disease has been more accurately studied, and its diagnostic characters better understood than they were but a few years ago, it has come to be considered very

generally that it cannot be controlled by any measures at present known. The measures just mentioned have mostly gone out of use in the treatment of the disease; at all events, few, if any, now resort to them, with the expectation of arresting the disease. The doctrine taught by the most approved writers at the present time is, that the typhoid and other forms of continued fever must have their course, and that the power of the physician is limited to palliating symptoms, sustaining the vital forces and guiding the disease to a favorable termination. This doctrine, however, is not accepted by all. Some years since, Dr. Henry, of Illinois, communicated for the medical journals several papers in which he asserted that opium in large doses, combined with calomel, succeeds in arresting alike remitting and continued fevers. More recently, Dr. Dundas, of Liverpool, has claimed in behalf of large doses of quinia a potency as great in continued as in periodical fevers. My distinguished friend and colleague, the Professor of Practice in this School, Prof. Fenner, advocates the use of quinia in large doses, combined with opium, as successful, if resorted to early and efficiently, in often cutting short continued fever, and in abridging its duration and modifying its intensity when the disease is not at once arrested. I have made some observations with respect to the abortive treatment of typhoid fever, and been led to think that opium in large doses and the wet sheet employed often, after the manner of the hydropathists, sometimes may succeed in arresting the disease.

Now you will, perhaps, ask why this matter is not settled to the satisfaction of all candid minds? It may seem to you that the question as to the efficacy of any particular measure could be very easily answered by an appeal to facts; but it is more difficult to bring facts to bear on this question than at first appears. The difficulty arises mainly from two sources. In the first place there is a liability to error in diagnosis during the early part of the course of typhoid fever, and this creates a distrust in the minds of others, and

in the mind of the observer also, when the disease appears to be arrested. In the second place, the disease appears sometimes to abort of itself; in other words, we meet with cases in which the phenomena attending the forming stage of typhoid fever are present, but the disease does not become fully developed, or if developed, it abruptly ceases and does not go on, irrespective of any measures of treatment.

To obviate the first of these difficulties it has ben proposed to wait until the eruption appears, and not consider the diagnosis as positive until this event occurs. The plan was pursued by Prof. Bennett, of Edinburgh, in testing the views of Dr. Dundas, and he found that the quinia failed in several cases in which he intended to give this remedy a fair trial. But the eruption in typhoid fever does not usually appear until the seventh day after the patient takes his bed, and by this time the disease has advanced nearly halfway through its career. The plan involves too much delay to secure for any measure a fair trial. We must, therefore, base the diagnosis on other circumstances, and make due allowances for a liability to error. In like manner, allowance is to be made for the natural abortion of the disease.

You see, gentlemen, that the question as to the efficacy of any abortive measure is not very easily settled. Great caution is requisite in the collection of facts. The observer must be competent for observation, and be careful as regards the diagnostic character, exclusive of the eruption. His mind must not be warped by undue enthusiasm or credulity, and, unfortunately, we find that not a few persons, who are not wanting in conscientiousness, are apt to see precisely what they desire or expect to witness. If in a considerable number of cases correctly observed, the disease abruptly ends or fails to run its accustomed course in a larger proportion, when certain abortive measures are employed, than when no such measures are tried, we must attribute to these measures more or less efficacy. Now, with regard to the efficacy of any particular remedies I shall not express an opinion in general terms, for I have not formed

any opinion on the subject. I regard the subject as a legitimate one for clinical observation, and that the accumulation of more facts than we at present possess, is necessary before we are prepared to come to any positive conclusions.

Without further preliminary remarks, let us direct attention to the cases of typhoid fever which have been treated in my wards this winter. The cases are few, for this disease has not prevailed to much extent in this city during the present season. I have recorded all the cases in my wards, and they are only four in number.

The first case proved fatal in about two weeks after the admission of the patient. In this case abortive measures were not employed. The characteristic intestinal lesions were found after death, and exhibited to the class; tuberberculous ulceration from another body being exhibited at the same time, in order to illustrate the points of contrast.

In this case, unexpectedly, extensive cystoid degeneration of the kidney was found, these organs being full of cysts, varying in size from a pea to a hickory nut.

Case No. 2, was admitted Nov. 14th. The patient had been ill for six or eight days, but he was not confined to the bed before he came to the hospital. His age was twen-eight. He had lived in this city for two years. On his admission he took to the bed. His expression was dull and the mind acted slowly. He had moderate diarrhœa which had existed for several days. Before coming to the hospital he had had epistaxis, pains in the head and limbs, lassitude, loss of appetite and some nausea. Tenderness was marked in the iliac region and gurgling. The abdomen was meteorized but not distended. There was moderate febrile movement. No eruption.

On the day after his admission, when I first examined the case (Nov. 15), I prescribed fifteen grains of the sulphate of quinia.

On the 16th, at my morning visit, he was dressed and sitting up, but he was evidently too ill to keep up, and he soon returned to the bed. He reported better than on the previous

day, but the symptoms were about the same. I repeated the quinia on this day.

On the 17th he was in bed and reported not as well. The diarrhœa had been troublesome during the night. The dullness of expression and slowness of mind continued. The febrile movement was moderate. Tenderness in the iliac region continued. The chest was everywhere resonant, and some sibilant râles existed on both sides. I counted two or three sore spots on the chest. I prescribed on this day for the diarrhœa, opium, gr. i, and tannic acid, grs. iii, three times, discontinuing the quinia.

On the 18th the daily record is as follows: "He reports no better; says that he did not sleep last night, owing to bad dreams. He had two dejections during the night and has had one this morning. The pulse is eighty; the respirations sixteen. He dozes but is easily aroused. The skin is warm and moist. Slight capillary congestion exists on the face and upper limbs. Tenderness in the iliac region continues. Three or four sore spots are found on the chest and abdomen. He has no appetite, but complains of thirst. There have been no manifestations of delirium. Treatment —opium, grs. ii, three times."

On the 19th, the symptoms were the same, and some incoherent talking during the night was observed by the ward nurse.

The treatment on this day had reference to an abortive effect, the case being now regarded as clearly one of typhoid fever. Five grains of the sulphate of quinia and three grains of opium were directed to be given three times.

Nov. 20th, the patient was dressed and sitting up, but was evidently quite feeble. Moderate diarrhœa continued. The pulse, while sitting up, was eighty-four, but on returning to the bed it fell to sixty-four. No manifestations of delirium. Tenderness in the iliac region, with gurgling, continued. The sore spots previously observed had disappeared. Treatment—opium, grs. iii, and the sulphate of quinia, grs. vii, three times.

Nov. 21. The patient sat up a portion of the previous day, and on this day he reported quite well. No dejection since the previous evening. Pulse sixty-four.

No medicine was prescribed; a diet of essence of beef, milk and bread was directed.

Nov. 22. Reported not so well. Did not sit up on the previous day. Several dejections occurred during the night. The pulse was seventy-two. The countenance was more dull. Treatment—opium, grs. iii, and the sulphate of quinia, grs. v, three times.

Nov. 23. The patient reported better, and the aspect was brighter. One dejection only. Pulse seventy-six. The patient sat up a portion of the previous day. Treatment continued.

Nov. 24th, the patient remained the same. Opium, grs. iii, and the sulphate of quinia, grs. vii, were prescribed.

Nov. 25th. The patient setting up a little daily; the mind clear; slight diarrhœa; no febrile movement. Treatment continued.

Under this date I have noted in the record of the cases the following remark: "The remedies have appeared to exert some controlling influence over the disease in this case, as shown by the changes for the worse on the 22nd, when the remedies had been withdrawn for a day, and the improvement when the remedies were resumed."

Nov. 26th. No material change. The treatment was continued.

Nov. 27th. Patient dressed and sitting up. Reported much better. The opium and quinia were suspended on this date, and a drachm of the compound tincture of cinchona three times was prescribed.

Nov. 28. No medicine and full diet.

Dec. 2. The patient reported well enough to leave the hospital, and was discharged.

Dating from the time when this patient took to the bed, and considering convalescence as distinctly existing when the medicine was discontinued and full diet allowed, the

duration of the disease was fourteen days. The disease was not cut short, but it is to be remarked that the amount of quinia prescribed fell considerably short of that given by those who claim for this remedy an abortive efficacy in typhoid fever.

The question in this case is, whether the disease was shortened or modified by the treatment. I am not prepared to give a positive answer to this question, for, undoubtedly, we observe cases of typhoid fever in which the disease is as mild and shorter in duration than in this case. But, as stated in the note which has been quoted, the change for the worse when the treatment was suspended for a day, and the immediate improvement when it was resumed, render it probable that some controlling influence was exerted. At all events, gentlemen, we may be permitted to conclude that the opium and quinia given in the case did not exert an unfavorable influence on the progress of the disease.

Case No. 3 I shall read from my records, as it will not occupy much time.

James Ellis, aged seventeen, admitted January 17th, was first seen by me on the morning of the 18th, and the record is commenced on the 20th.

He stated that he had resided in this city since August last; that he had been ill for eight or ten days, but took to the bed only two days before his admission. His ailments before admission were cephalalgia, loss of appetite and nausea, moderate diarrhœa and pain in the abdomen, lassitude and debility. Epistaxis occurred on the day after his admission. The symptoms on the 18th were, moderate febrile movement, capillary congestion of the face, moderate diarrhœa, tenderness over the abdomen and resonance without distension, want of appetite, thirst and debility The treatment on the 18th was Dover's powders, grs. v. and the sulphate of quinia, grs. v. three times.

On the 19th his condition was about the same. No, eruption was discoverable. The pulse was one hundred

and four. The treatment on this day was, opium, grs. ii. and the sulphate of quinia grs. x, twice.

On the day of the first record (20th,) I learned that he had been delirious during the night, talking incoherently, and getting out of bed, saying that he wished to go home. At the time of my visit in the morning, he seemed rational. At the present time (2, P. M.) he lies dozing, and frequently talking incoherently. He is readily aroused, and replies to questions promptly and rationally. The abdomen is resonant and moderately distended. Tenderness in the iliac region, and over the abdomen generally continues. He relapses into a dozing state immediately after being aroused, and begins to mutter. The skin is warm and dry. The pulse is one hundred and four, and the respirations twenty-four. There is no eruption. Physical exploration of the chest yields a negative result.

This morning I prescribed opium, grs. ii, and the sulphate of quinia, grs. x, three times, with half an ounce of wine every four hours, and sustaining diet.

Jan. 21. He has passed a quiet night without muttering or any manifestations of delirium. He states that he has had a little buzzing in the ears. The pulse is ninety-six; respirations twenty-four. Diarrhœa continues with abdominal tenderness. He continues to doze most of the time, but is easily aroused. Treatment—opium, grs. iii, and the sulphate of quinia, grs. x, three times, with wine and diet as before.

Jan. 22. The aspect is much brighter. Some muttering during the night, but no other manifestations of delirium. The pulse is eighty-four; the respirations are twenty. Abdomen is not distended, and the tenderness is slight. No diarrhœa.

To-day no medicine is prescribed, but wine and diet as before.

Jan. 23. Aspect bright. Pulse seventy-six; respirations twenty. Slight abdominal tenderness. He seems to be distinctly convalescent. No medicine.

Jan. 24. Continues bright. Pulse seventy-two; respirations twenty. No diarrhœa and no abdominal tenderness nor distension. He has appetite, but complains of occasional vomiting after taking food, for which a scruple of the subnitrate of bismuth three times was prescribed.

Jan. 25. Reports perfectly well, excepting want of his usual strength. The bismuth has been discontinued.

Jan. 30. The patient reported well enough to leave the hospital and was discharged.

In this case, gentlemen, we have the career of the fever ending on the eighth day, dating from the time of taking to the bed. The diagnostic characters of typhoid fever exclusive of the eruption, were well marked. Now, it is undeniable that this disease sometimes ends, of its own accord, with as brief a career as eight days, and I am not prepared to affirm positively that the quinia and opium contributed to the short duration. That these remedies exerted a controlling influence, however, I cannot but consider as probable.

Admitting the need of an accumulation of cases before a more positive opinion is admissible, the case shows, to say the least, that there is no hazard in repeating experimental observations of this kind.

Case No. 4, is also brief, and the reading of the notes will not occupy much time. It is proper to state that the greater part of this case was made by Mr. Profilet, the house student assigned to my wards.

Robert Pricely, aged nineteen, was admitted February 15th, and the record is commenced on the 16th.

He states that he was ill four days before his admission and confined to the bed three days. He has now diarrhœa, which has existed from the commencement of his illness. The abdomen is tympanitic, and tenderness in the iliac region is marked. The mind is dull. The tongue is dry. The face is congested. The pulse is one hundred.

On exploration of the chest, dullness on percussion, bronchovesicular respiration and bronchophonic voice are found

over a small space of the upper portion of the posterior lobe of the right lung. Treatment—opium, grs. iv, three times.

Feb. 17. He reports better. Pulse eighty. All the symptoms are improved. The physical signs of solidification continue within the circumscribed space in which they existed yesterday. Treatment continued.

Feb. 18. The patient's mind is still sluggish; he answers questions coherently, but after considerable hesitation. He is now sweating profusely. Pulse sixty; respirations twelve. The abdomen is still somewhat tympanitic, and tenderness in the iliac region, continues, but is diminished. Six sore spots, with all the characters of the typhoid eruption, are counted upon the abdomen and chest.

The solidification of lung has not extended, and the signs show that its degree is less. Treatment continued, with an ounce of brandy three times and sustaining diet.

Feb. 19. Improvement is manifest. Pulse fifty-six; respirations twelve. The eruption has disappeared. No diarrhœa. The mind is bright.

No extension of the pneumonia, and the solidification is disappearing. Treatment—the opium is discontinued; the brandy continued and diet as before.

Feb. 20. Convalescence continues and the patient desires to sit up.

Feb. 25. The patient reported well enough to leave the hospital and was discharged.

The career of the fever ended in this case on the seventh day from the time of taking to the bed, the treatment consisting of twelve grains of opium per day, and this treatment continued for three days. The diagnostic characters of typhoid fever were marked, and on one day the characteristic eruption was observed. Did the disease end from an intrinsic limitation, or was it arrested by opium? In answer to this question, I have only to repeat the remarks which were made in connection with the preceding case.

The last case is interesting from the existence of pneu-

monia as a complication, which, like the fever, seemed to be arrested, not extending over the lobe, and rapidly disappearing.

We have thus, gentlemen, reviewed our experience in the management of typhoid fever during the past winter. Three out of four cases have recovered. In the fatal case no abortive measures were employed. In one of the remaining three cases opium and quinia were given in pretty full doses. The duration was fourteen days, and the disease was extremely mild. In the second of these three cases opium and quinia were given, the former in full and the latter in large doses. The duration was eight days, and the course of the disease extremely mild. In the remaining case, opium alone in large doses was given, and the duration was seven days. In the first of these three cases the abortive treatment was commenced on the sixth day of the disease, dating from the time of taking to the bed; in the second and third of the cases the treatment was commenced on the fifth day. In the first case the duration of the disease was eight days after the treatment with quinia and opium was commenced; in the second case the disease continued for three days after the treatment with quinia and opium was commenced, and in the third case the disease ended on the second day after opium was prescribed in large doses.

These three cases, considered alone, are not of great value; but they are valuable as encouraging experimental researches in the same direction, and as a small contribution towards the stock of recorded facts, by means of which it is to be determined whether typhoid fever be amenable to abortive measures of treatment.—*N. O. Medical Times.*

Surgery.

On Perineal Section.

BY J. MASON WARREN, M. D.

One of the Surgeons to the Massachusetts General Hospital.

The distinguished surgeon, Mr. Syme, of Edinboro', has of late years brought more particularly to the notice of the profession the incision of the urethra in the perineum for the purpose of relieving strictures of a bad character. Some confusion seems to exist as to the cases for which this operation is more particularly applicable. So far as we can understand Mr. Syme, his operation appears to be directed to those cases which are permeable to the instrument, yet so irritable and intractable as to be a permanent source of irritation to the patient. Mr. Syme considers that every stricture, with patience, is capable of being penetrated. Other gentlemen, and particularly Mr. Bryant, in an excellent paper in Guy's Hospital Reports, think, there are certain cases of stricture admitted to exist by most surgeons which no patience will overcome, and which the use of the knife alone will remedy. In these he advises, that an instrument should be introduced into the urethra as far as allowed by the obstruction; the finger of the left hand is then introduced into the rectum as a guide to the prostate or neck of the bladder. The integuments now being divided, the knife is introduced with its back towards the rectum so as to strike the urethra in front of the prostate, and a cut is made forwards till it meets the instrument in the urethra.

Mr. Bryant, after mentioning the different forms of stricture requiring this operation, rejects that in which with retention of urine the urethra is impermeable to an instru-

ment; for which case he advises as the only proper operation the puncture of the bladder through the rectum. Without entering upon a discussion as to the merits of the operation, we would simply state, that in our experience this is the very case which most frequently calls for the active interference of the surgeon; and there seems to be no good reason, if the history indicate a callous and incurable stricture as the cause of the retention, why the operation should not be so extended as to divide the stricture at the same time, and give the patient a chance of permanent instead of temporary relief.

In order to illustrate this subject and bring it more fully before the profession I propose, by the exhibition of two or three cases, to show the advantage of the operation in these extreme cases which we are so often obliged to deal with; as it is well known that in permeable strictures, to which Mr. Syme's operation would be applicable, the patient, so long as he could obtain relief otherwise, would be unlikely to submit to a cutting operation. One of these is a case in point with those mentioned by Mr. Bryant, viz., a case of organic stricture of long standing gradually diminishing the calibre of the urethra, and finally terminating in complete retention. In this case, it will be perceived, that instead of puncturing the bladder through the rectum, as would have been the practice of Mr. B., the urethra was cut down upon in the perineum, opened near the neck of the bladder, and then the whole portion of the strictured urethra divided; and a large instrument being introduced the urethra was moulded upon it until a complete cure was produced. The other two cases are those in which the operation of Mr. Syme must have been rejected; as, after much patient treatment in one of them no instrument could be made to enter the bladder, and in the other, although for a time an instrument could pass through the stricture, ultimately this became impracticable, and the patient's life was gradually being exhausted by pain, confinement, and the irritation and discharge from the

numerous fistulous openings in the scrotum and perineum. To Mr. Syme undoubtedly belongs the credit of having fully brought this subject before the profession, and shown the great relief that might be extended to a class of cases allowed to linger on in torment through many years.

In his very valuable paper Mr. Bryant has indicated yet other cases, a class to which the attention of hospital surgeons is much more likely to be called, and of which the preceding are an illustration. We take the liberty of copying Mr. Bryant's conclusions, to which we fully agree, with the exception of the first, upon which we have commented above.

"*Conclusions.*—1. In uncomplicated retention of urine from organic stricture, the operation of opening the urethra in the perineum is not required, the more simple and safe one of puncturing the bladder through the rectum being preferable.

2. When complicated with extravasation of urine from any cause it should be performed at once, and the stricture, when present, divided, if possible.

3. In laceration of the urethra from injury, when a catheter cannot be passed, the urethra should be opened.

4. And also when the above injury is associated with pelvic mischief.

5. Strictures are occasionally met with which are impermeable, and urethras which are obliterated.

6. That in cases of organic stricture, when the passage of a catheter is possible and not difficult; where it does not produce either any injurious, or painful constitutional or local disturbance, and where, after dilatation of the stricture, an occasional passage only of the instrument is required to maintain an open channel, no other surgical means can be called for.

7. That cases of stricture do occur occasionally, which are so exquisitely sensitive, and in which the passage of a catheter, however skilfully performed, is followed by such severe constitutional and local disturbance as to produce

more harm than good; and others, which are relieved by means of a catheter, and are even fully dilated, but which have a tendency to contract again immediately upon the omission of the treatment; in such cases the operation of 'external division' is most valuable.

"8. That the majority of cases of what are called impermeable strictures may be rendered permeable by constitutional treatment, but that some are undoubtedly impermeable; in such cases the operation of 'perineal section' is of value.

"9. When the urethra is obliterated the operation of 'perineal section' may occasionally be demanded, particularly when associated with perineal fistula.

"10. That the worst and most intractable forms of stricture are the result of injury, and in those cases the operation either of 'external division' or 'perineal section' is of great value.

"11. That in boys the operation is not so successful as in adults, although no better can be suggested."

Case 1. *Organic Stricture of the Urethra of Ten Years' Standing; The Urine finally passed in Drops; Retention; Perineal Section; Division of the Stricture; Complete Recovery.*—A. L. Foydt, about thirty years of age, entered the hospital on April 30, 1860, with a stricture of the urethra of ten years' duration. The water, when he entered, passed in a very small stream, and urine was constantly dribbling away from him during the night, accompanied with a purulent discharge. He complained of pain in the renal region, though not of a severe character. After very careful attempts to pass a bougie of the smallest description, it was finally decided to attempt to cut the stricture from within, which was done from a canula with a concealed blade, on May 15, and which, although it cut but partially through the stricture, seemed to afford him temporary relief.

On May 26. the urine became less free; there was considerable dulness in the pubic region, and the patient com-

plained of pain about the bladder, with general uneasiness. I had already made up my mind to perform the perineal section in this case, and ordered the preparations for the operation to be made for the following day.

On visiting him the next day, I found he had a complete retention of urine, and therefore proceeded at once to the operation. The patient was placed on a table, on his back, and after being thoroughly etherized, so that his joints were fully relaxed, he was tied as in the operation for lithotomy. I have found it much better to confine the limbs in this way than to intrust them to the care of assistants, who are apt to be worn out during an operation so likely to be long and tedious. A small staff was introduced, and it seemed to penetrate the first stricture, which as stated above, had been incised about a couple of weeks before, and brought up against a second stricture, apparently just behind the scrotum. The forefinger of the left hand was now introduced into the scrotum, and the situation of the prostate ascertained. The perineum was then divided, and a careful dissection made, to ascertain the site of the urethra. This was rendered very tedious from the constant discharge of blood at the bottom of the deep wound from the bulb of the urethra, which in this case was more than ordinarily troublesome. The urethra, however, was finally opened directly in front of the prostate, and a gum-elastic catheter passed into the bladder, giving exit to a very large collection of urine. The canal was now opened forwards, and the callosities freely divided, until the staff was reached. A second gum-elastic catheter was now passed downwards through the penis until it appeared in the wound; and the ivory end of the first having been cut off, the point of the second was insinuated into it and firmly fixed. In this manner it was dragged up through the whole extent of the urethra. It might be here mentioned, as a hint for finding the urethra, which I have before practised upon, without the staff for a guide, and where other means have failed, to do as was done in the present case—viz, allowing the pa-

tient partially to recover from the ether, stimulate him to make an effort to urinate, and when the urethra behind the stricture became dilated, a minute stream of urine issued, indicating the spot for the introduction of the probe, and the urethra was found. No unpleasant symptoms followed the operation. On the next day the patient expressed himself in a state of great comfort, more so than he had experienced for many years. The sense of fullness, arising from probable distension of the bladder, ureters, and pelves of the kidneys, having entirely passed away. At the end of a week the first catheter was removed, and at once replaced by another, which had been prepared the day before, of the same size and curve. The catheter was found to have been partially acted upon by the urine, and its calibre somewhat obstructed.

At the end of a month the patient was able to introduce the instrument himself; and at the end of two months, the wound in the perineum having nearly healed, he kept it in at night, leaving it out during the day.

He shortly after left the hospital, well, with the exception of a small aperture not larger than a pinhole, and some weeks subsequently presented himself there on the eve of a voyage to sea.

Case II. *Stricture of the Urethra of Twenty-five Years' Duration; numerous Urinary Fistulæ in the Scrotum and Perineum; Perineal Section; Cure.*—E. O. B., shipmaster, entered the Massachusetts General Hospital on April 24, 1860, and gave the following history of himself. He had suffered from gonorrhœa twenty-five years previously, and was treated by his captain at sea by strong injections. The gonorrhœa terminated in gleet, which was treated by bougies for two years, when it was renewed on account of increased obstruction. He then remained pretty well until eight years since, when the strictures became so tight as to give him a great deal of inconvenience, for which he entered the hospital, under my care, and the stricture was divided

by internal incision. This relieved the urinary trouble, and for a time he enjoyed good health. Two years since a fistulous opening appeared in the perineum; four months later another in the scrotum; five months since a third; through these openings purulent matter with urine was freely discharged. The whole of the scrotum was tense, indurated, and barred by sinuses. Two months previous to his admission a No. 1 bougie was passed into the bladder, after much effort; his symptoms have been aggravated by it.

I passed a No. 1 bougie down to the stricture, and kept it applied for two or three hours daily, exerting a gentle pressure against the stricture. After treatment for about a week in this way, the stricture gave way, and the instrument passed into the bladder.

On May 1, I made an incision into one of the scrotal openings, and gave vent to a quantity of purulent matter mixed with urine. Notwithstanding the passage of the bougie, the symptoms of trouble about the scrotum increased, and towards the 1st of June, the stricture having again closed, so that it was quite impossible to pass any instrument, the operation was done, at his request, on June 4.

The patient being etherized, and confined in the position for lithotomy, Syme's sound was passed through one stricture, and encountered a second. An incision was now made in the median line of the perineum, and dissection performed until the point of the staff was reached. The tissues were much hardened, and infiltrated by a deposit, which greatly opposed the progress of the knife. The flow of blood from these diseased parts interfered much with the operation; the perineum also was uncommonly deep. In order the better to bring the continuation of the urethra beyond the stricture into view, the end of the staff was turned out through the incision, and served to hook up and thus bring the deeper parts more fully in sight. The wound being freely sponged with iced water, a puncture was made into the supposed urethra, in the neighborhood of the neck of the bladder, which allowed the passage of a probe into

that organ; and the urine having escaped, showing it had gone in the right direction, a large gum-elastic catheter was substituted for the probe. A sharp-pointed knife was now passed up by the side of a small Syme's sound, and the first stricture, which lay behind the middle of the scrotum, and which would not allow anything larger than the sound to pass, freely divided.

A second gum-elastic catheter was now introduced through the glans and urethra, insinuated into the mouth of the first, which remained in the bladder, and was thus drawn upwards as in the former case.

No great constitutional irritation followed the operation, and the patient on the following day described the comfort of freeing the bladder by a large stream, after having suffered for so many years in his efforts to do so, as beyond belief. The first bougie was left in place a week, then becoming obstructed, it was replaced by another, and this was done weekly through the course of the treatment. The wound in the perineum, on account of the diseased state of the tissues, was very slow in healing, and the patient remained in the hospital for two months afterwards.

A communication was received from him in Nov. 1860, in which he states that he was well.

Case III. *Traumatic Stricture of the Urethra of Five Years' Duration.*—G. U., 36 years of age, a teamster, came into the hospital under my care in the early part of the spring of 1860. He said that five years before he had been jammed against a wall by the buffer of a freight car with such force as to produce a rupture of the urethra. He remained in a critical situation for a time, and had never since been able to pass his water, except in a very small stream. Two years previous to his admission, a fistula appeared near the tuber ischii of the left side, between that and the rectum. His water has passed by drops through this fistula, and another in the rectum, ever since. Various attempts have

been made to perforate the stricture, but all of them without avail.

On examination by the rectum I found that the bladder, intestine, and surrounding parts were glued together and involved in an indurated mass, and the calibre of the intestine was very much diminished. A probe being introduced into the fistula by the side of the rectum, passed up by the side of the gut through these indurated tissues, and apparently entered the interior of the bladder. Having made very careful attempts for a time to get through the stricture by gentle means, I finally advised him, unless willing to have the perineal section performed, to desist from any further efforts, for fear of producing irritation and complete retention, especially as he did not suffer much from his disease.

In June, having heard of the success of two of the above operations, he came back to the hospital for the purpose of having one performed upon himself.

Operation.—A sound was passed down as far as the stricture, an incision made upon it, and its point reached deep in the perineum. No traces of the urethra beyond could be discovered by the most careful manipulation. He was, therefore, allowed to recover partially from the effects of the ether, and to make an effort to void his urine. An incision was now made in the direction of the neck of the bladder, and a female catheter introduced as a guide, which was replaced by a No. 8 elastic catheter. The parts were very vascular, and the steps of the operation, which lasted over an hour, much obscured by blood.

Not the slightest unfavorable symptom followed: but at the end of the week, when it was necessary to replace the catheter, it was found to be a matter of much difficulty to do so, the end of the instrument escaping into the rectum. This was, however, finally effected both at that time, and afterwards, by hooking the beak of the instrument against the pubes, and then, instead of trying to force it forwards, the handle was suddenly depressed, and it slipped into the

bladder. Carried forwards in the ordinary way, it always went into the rectum.

On the 27th, it was recorded that all the urine was discharged by the catheter, although there was purulent discharge through the fistulous opening near the rectum, and occasionally from the rectum itself. The patient remained in the hospital rather more than two months, when he left, and has since been seen well.—*Am. Jour. Med. Sciences.*

Obstetrics.

On the Treatment of Uterine Inflammation by Nitrate of Silver and other Substitutive Agents.

BY E. J. TILT, M. D., M.R.C.P.

In using these agents, we only apply the general principles of therapeutics to the treatment of inflammatory affections of the womb and its associated organs. The utility of a solution of acetate of lead in inflammatory affections of the skin implies similar utility in inflammatory affections of the vaginal mucous membrane; the utility of solutions of borax and of chlorate of potash in affections of the mouth pointed to their trial as vaginal injections; the utility of sulphate of zinc and nitrate of silver in urethral strictures demonstrated by J. Hunter, Sir E. Home, Lallemand, &c., suggested their employment in uterine catarrh; the sovereign utility of the solid nitrate of silver for the cure of cutaneous ulcerations caused it to be tried in ulcerations of the womb. To whatever mucous membrane

these agents are applied, they act in the same way—they substitute a therapeutical irritation, susceptible of being graduated to a morbid irritation, which might uncontrollably compromise the structures attacked—a temporary irritation to one that tends to become permanent.

In treating of injections, I have already enumerated several agents which act in this way, such as borax, chlorate of potash, acetate of lead, alum, sulphate of zinc, &c. They are generally given largely diluted, but if used in a solid or highly concentrated state, the action of these agents would be analogous to that of two other important agents, nitrate of silver and tincture of iodine, which are called caustics by courtesy, but are no more caustics than tincture of cantharides. I wish it to be clearly understood that I hold these agents sufficient for the surgical treatment of uterine inflammatory diseases in the large majority of cases, and so does Dr. H. Bennett, although it has been stated that we use strong caustics in ordinary cases of uterine disease. In a comparatively small number of instances, the structures of the womb have been too deeply modified by inflammation or by hypertrophy, and are in so low a state of vitality, that the above-named agents are insufficient to bring about a cure of the disease. Then I have recourse to another class of substitutive agents, which are undoubted escharotics, for they cause a loss of substance proportionate to the amount of caustic used. Those caustics induce healthy acute inflammation in the tissues underlying the eschar, and, by judicious management of this healthy inflammatory action, the cure of chronic cases is often induced.

The caustics of which I shall treat are, the acid nitrate of mercury, potassa fusa cum calce, potassa caustica, and the actual cautery. At first sight it may seem strange to class together sulphate of zinc and potassa fusa cum calce, but one is justified in doing so, because the substitutive action which I ascribe to a solution of sulphate of zinc is pre-eminently shown in the results of potassa fusa cum

calce, which often so raises the vital endowments of the uterine tissues as to promote rapidly healthy nutritive action in tissues which had been diseased for many years.

Such is my mode of practice, and I am glad to find that it accords to a certain extent with the practice of all whose opinion carries weight, and who, having in vain tried to cure uterine diseases by nitrate of silver or milder measures, have recourse to one or the other of the strongest caustics. Dr. Fleetwood Churchill depends on nitric and muriatic acids, and on the acid nitrate of mercury, which is also preferred by Dr. E. Kennedy and by Dr. West; and although this distinguished pathologist considers ulceration of the cervix to be a condition of slight pathological importance, when he has to trace out a plan of treatment for his pupils, he has none other to propose than that already long ago carefully laid down by Dr. H. Bennet. The late Dr. Rigby, though adverse to the surgical treatment of uterine affections, admitted that there were certain cases of uterine ulceration requiring the use of potassa fusa, or potassa fusa cum calce. Dr. H. Bennett prefers potassa fusa cum calce. This is not energetic enough for Professor Simpson, who uses potassa caustica; while the French strongly advocate a remedy older than Hippocrates, the actual cautery.

These comments upon the treatment of uterine inflammation will show that I am an eclectic, and that I use all the valuable agents which I have enumerated in certain cases which I shall specify. Again reminding the reader that I am not writing a treatise, I shall proceed to comment on the use of our principal substitutive agents.

Tincture of Iodine.—It is the ordinary tincture of the Pharmacopœia which I mean, not the caustic tincture. I shall be brief on this agent, having already mentioned it as a revulsive, and having compared it with others then under discussion. Tincture of iodine seems to act as an astringent when slightly applied to the hypertrophied or inflamed surface of the neck of the womb, but as a vesicant

if several applications are made at one and the same time, and as a resolutive if re-applied every third or fourth day. It is much less useful than nitrate of silver as a topical application, but it suits better some idiosyncracies, and is well borne in diphtheritical inflammation, when nitrate of silver should not be used. The fact that a solution of iodine can be injected into closed cavities and fistulous passages without severely inflaming them, marks it out as the best liquid to be injected into the body of the womb, in the very rare cases requiring such treatment; for it has less frequently given rise to the alarming symptoms of peritonitis, which have very often followed the intra-urine injection of a solution of nitrate of silver. I use one drachm of the tincture to an ounce of distilled water, and inject it by means of an instrument similar to that devised by Mr. Coxeter for injecting fluids into the larynx.

Nitrate of Silver.—"The application of nitrate of silver is a means, under certain circumstances, of subduing external inflammation. Might it not, on this principle, be of service in the treatment of the internal phlegmasia?" Such was the question asked by Mr. Higginbottom in the preface of his admirable little work on "The Lunar Caustic," published in 1826. His question has been answered in the affirmative by a great many practitioners, who have applied nitrate of silver for the cure of inflammatory affections of the mucous membrane of the eyes, ears, mouth, throat, urethra, the intestines and the rectum. As regards the mucous membrane of the genital organs, Dr. Jewel, in 1830, strongly advocated its use; and I have no hesitation in saying that this great agent is quite as useful in curing the varied inflammatory conditions of the genital organs as in curing those of the skin. It is often necessary to preface the use of nitrate of silver by linseed tea, poppy-head, or other cooling injections, in the same way that Mr. Higginbottom repeatedly inculcates the utility of cold poultices previous to applying nitrate of silver to the inflamed skin. If, after antiphlogistic treatment, the solid

nitrate of silver increases too much habitual pains, or causes the ulcerated surface to bleed for two or three days afterwards, it is well to try a solution of from forty to sixty grains of nitrate of silver to an ounce of distilled water. In many cases the solution is sufficient to effect a cure; it gives less pain, but it may be necessary to repeat it every third or fourth day. Sometimes I use a solution of nitrate of silver containing one ounce to the salt of two or three ounces of distilled water, as an application to ulcerated surfaces. Chronic uterine catarrh, or inflammation of the mucous membrane lining the neck of the womb, which has been truly called an open gland pouring out mucus from ten thousand follicles, seems to me the most frequent of all uterine diseases. Without having the slightest abrasion, the mucous membrane lining the neck of the womb and its vaginal surface may be of a dusky, livid hue, tender on being touched, and secreting pus. This condition may last for years, but it generally leads to more or less extensive denundation of the villi of the uterine mucous membrane, and gives an excoriated appearance to the neck of the womb. Such cases, with or without excoriation, can be cured by the nitrate of silver in solution, and every fourth or fifth day, with the occasional use of the solid nitrate. If the mucous membrane lining the cervix be principally affected, it is often so obstinate as to render the painting of it with the solution little use. The solid nitrate must be freely employed, and when the cervical canal is unusually dilated, I sometimes leave about one-eighth of an inch in the canal; by which it will be clear that, so far as my experience goes, should the stick accidentally break in the cervical canal it need give no alarm. What cannot be removed will cause more pain, some loss of blood, and perhaps even a return of menstruation; but the patient may be repaid for greater suffering by a speedier cure. It has been stated by Nonat that this mode of treatment has caused stricture of the uterine canal in his practice and in that of Richet. I have never met with this accident,

and I think its occurrence is to be prevented by the occasional passage of the uterine sound for a few weeks after this severe application.

With regard to the treatment of the various forms of ulceration of the neck of the womb, I can add nothing to what has been so well laid down in Dr. H. Bennet's work. Mr. Higginbottom, whose statements with respect to the action of nitrate of silver deserve the highest consideration, affirms that its action does not extend beyond three days after its application; and it is generally received that it is necessary to repeat the use of this agent so soon as the epithelial pellicle has fallen off, or every third or fourth day. In many instances this is the best way of ensuring the most rapid recovery; but I do not recommend the too strict adherence to this precept, as it is often well to leave five, six, or seven days' interval between the applications, or we might work as did Penelope, and retard the cure of the case. This, however, is a matter of surgical experience in each individual case.

Whether vaginitis occurs spontaneously or as the result of uterine catarrh, it is best cured by the injection of a solution of nitrate of silver. This is an excellent idea of Dr. Jewel, but if the solution be sufficiently strong to do good it cannot be safely trusted to the patient. The patient being placed on her back, a small glass speculum should be introduced as far as possible, and an ordinary glass syringe full of a solution of nitrate of silver, containing forty grains to the ounce, should be injected. The speculum should then be withdrawn to the vicinity of the vulva, and the fluid should be left in contact for three or five minutes, after which the speculum is to be withdrawn, and the fluid received in a small cup. Sometimes I apply a speculum of appropriate size, and as I withdraw it I pretty freely touch the vagina with the solid nitrate of silver diluted by chloride of silver, as prepared by Mr. Squire. This is a modification of a plan recommended by Ricord.

I recommend these injections where there is evidence of inflammation of the womb, with excoriations of its cervix, in virgins in whom the integrity of the hymen prevents the introduction of a moderate-sized speculum. This plan should be first tried before forcibly dilating or incising the hymen—an operation which is very rarely required. I have frequently made these injections in many cases, and I do not once remember having traced menorrhagia to their administration. I mention this as it seems to have often occurred in the practice of Dr. Fleetwood Churchill. So many serious accidents have followed the injection of the solution of nitrate of silver into the body of the womb, that I prefer using tincture of iodine in solution whenever intra-uterine injections may be required. In very rare cases of chronic internal metritis it may even be necessary to apply the solid nitrate of silver to the internal surface of the body of the womb, as well as to adopt other modes of treatment, for an account of which I refer the reader to my papers on the Treatment of Internal Metritis.*

In follicular inflammation of the labia in eczema and prurigo pudendum, or pruritus both external and vaginal, a piece of cotton wool should be soaked in the solution of nitrate of silver, and carefully rubbed for two or three minutes over the diseased portions of the skin and mucous membrane. I can speak with confidence of this plan, for I have lately cured several patients who had been suffering in this way for four, eight, and thirty years. When cases have lasted so long the pudendal skin looks and feels like parchment. It was so in the case of a lady in whom the disease had lasted thirty years, and I first rubbed in the solution every day, then every other day, then every fourth and fifth day, until the skin became soft and pliable, and the sleep was no longer disturbed by darts of pain flashing along the nerves. This patient was cured in three months, and has had no relapse during the last year.

*The Lancet, 1853, vol. ii.

I trust I have said enough in praise of nitrate of silver; but in many forms of uterine inflammation much more severe agents are required to restore the womb to a healthy state. This fact is admitted by so many authorities at home, in America, or in foreign countries, that I am surprised to find the contrary asserted by Dr. Meigs and Dr. Tyler Smith. After describing the evil effects of caustics in the treatment of uterine disease, the latter pathologist, in his work on "Leucorrhœa," (p. 203), gives as his opinion that "there is no good which can be effected by the more powerful caustics which cannot be accomplished by the nitrate of silver, or by other means. It is true that by the prolonged application of the nitrate of silver loss of substance may be caused; but this is far less likely to occur with lunar caustic than the more powerful escharotics. It is also true, that some practitioners apply the more violent caustics so lightly that they do not exceed the milder medical action of the solid nitrate of silver: but in such cases it would be quite as well to use the safer remedy where a caustic is required." And at p. 206, "In applying the nitrate of silver, the aim should be not to produce any slough or loss of substance." Thus it is clearly stated that the slight application of the strong caustics is tantamount to the full action of the nitrate of silver in like cases of uterine disease.

My experience, on the contrary, teaches me that nitrate of silver is no more a caustic than tincture of cantharides, as Mr. Higginbottom has long ago asserted. The distinction that Dr. Meigs draws between the antiphlogistic touches and the escharotic action of nitrate of silver, does not bear examination. Use it as you may the nitrate of silver does not cauterize. Leave it in the neck of the womb, it will cause more pain, loss of blood, and subsequent discharge, but no destruction of tissue, unless coagulated mucus mixed up with ephithelial scales and insoluble chlorides of silver can be called such. Even when applied to a fungous ulcer, the slight loss of substance is rather due to the friction of a

hard body on a pulpy than to the chemical combination of the neutral salt and the diseased tissues. A densely hypertrophied neck of the womb might be whitened with the solid nitrate of silver every fourth day until doomsday, without much reducing its bulk. Indeed I have seen such a plan of treatment injudiciously continued for a year or longer in a case of hysteralgia, the neck of the womb being healthy and of an average size, and the effects were rather astringent than caustic, condensing the tissues, narrowing the cervical canal, and rendering its dilatation necessary and difficult. Thus, while nitrate of silver may be repeatedly applied without inducing a loss of substance, the slightest application of the potassa fusa to the neck of the womb produces an evident loss of substance; and, therefore, the two agents, however applied, produce totally different effects in similar cases. This is a question of surgical therapeutics which can be decided by any experienced surgeon. Writing on the treatment of stricture caused by gristly thickening of the urethral mucous membrane, Mr. Wade records his twenty-five years' experience of the comparative advantages of nitrate of silver and of potassa fusa, and he states: "I cannot let this opportunity pass without again calling attention to the fact, that the effects of the argentum nitratum and of the potassa fusa admit of no comparison, as they are totally dissimilar; that the former, when freely used, from its tendency to cause adhesive inflammation, has often been found to increase the urethral obstruction, whilst the remarkably solvent powers of the latter have no such tendency."*

The too free use of the nitrate of silver to the inodular tissues of the urethra causes urethral stricture, as the too free use of the same agent to the cervical canal causes stricture of the neck of the womb, but without loss of substance. Indeed, if the whole range of diseases in which nitrate of silver is now used be passed in review, it will be found that it

*Wade, Stricture of the Urethra, 4th Edit., p. 117.

always acts by its dynamic, astringent, and antiphlogistic properties; whereas escharotics can only raise the standard of vitality of any given tissues by the previous destruction of their superposed surface. I maintain, on the contrary, that there is one good to be done with the more powerful caustics which cannot be accomplished by the nitrate of silver; that is, to shorten the treatment of many cases in which it is *at first*, judicious to try it. Ulceration of the neck of the womb, on a hypertrophic basis, may doubtless be sometimes cured by the use of the nitrate of silver, but the treatment might be indefinitely prolonged; whereas it can be very much shortened by one or two applications of the acid nitrate of mercury or of potassa fusa c. calce. When the inner cervix is chronically inflamed, nitrate of silver may enable us to effect a cure; but with that agent, however applied, cures are sometimes so tedious that it is well to resort to one or two applications of the acid nitrate of mercury or of potassa fusa c. calce. In fungous and varicose ulceration the nitrate of silver causes the surfaces to bleed profusely, and does more harm than good; whereas I find that in these cases the acid nitrate of mercury and the actual cautery stop the bleeding and promote a cure. I think it right to be sparing of caustics to the neck of the womb in pregnant patients: but I have seen cases similar to those described by Dr. Bennet in which it was necessary to stop an abundant purulent and bloody discharge from a large varicose ulcer, and I have done so with the acid nitrate of mercury after doing more harm than good with the nitrate of silver. So little are caustic agents and nitrate of silver interchangeable substances or therapeutical equivalents, that I find nitrate of silver in some cases to be positively poisonous, while potassa fusa c. calce conduces to recovery. In diphtheric inflammation of the neck of the womb and of the vagina, nitrate of silver acts as a poison. In a case now under treatment there is a small patch of false membrane on the posterior lip of the os uteri, and around it are numerous ulcerations. Were I to touch them with

nitrate of silver they would soon be covered with false membranes. Tincture of iodine would not produce this effect, neither would the potassa fusa c. calce; these, therefore, are the best means of curing this most tedious complaint, of which I have seen two instances and Dr. Bennet three, and he would endorse what I affirm of such cases. Occasionally we meet with cases like two I am now attending, in which an extensive superficial excoriation of the neck of the womb bleeds profusely, and for the following two days, even when only touched with the solution of nitrate of silver, which likewise makes the sore more angry. In these cases I have nearly effected a cure by dressing the wound with tincture of iodine or the acid nitrate of mercury.

The profession is more and more convinced of the great utility of caustics in many diseases; were it otherwise, surgery would be deprived of a valuable remedy, and the obstetric art robbed of the only means of curing the most distressing cases of uterine inflammation. Patients would thus have to drag on from year to year their weary load of misery, with the only hope that the cessation of menstruation, by putting an end to the physiological liability of the womb, might also check its liability to inflammation.—*London Lancet.*

The Value of Anæsthetic Aid in Midwifery.

Dr. Kidd read before the Obstetrical Society of London, December 5, 1860, a paper on this subject. In obstetric practice, the instances where the author has found the inhalation of ether or chloroform to be called for in an especial degree, and where anæsthetic aid has proved decidedly useful, have been cases of version, forceps, twins, convulsions, and crochet operations. He has known chloroform used in puerperal mania, but its apparent effect is perhaps a coincidence, and not of a curative nature. The author referred the society to his previous work on *Anœsthetics*, where the result of 360 cases of midwifery treated under ether, and 1,700 under chloroform, without accident from fatty heart, are described. Of these two agents (though there have been twenty-five deaths from ether in general surgery,) he believes ether is superior to chloroform in relaxing rigid perineum in labour, and otherwise acting on the muscles of the uterus, in version cases particularly. There have been no accidents from chloroform in about 30,000 cases of midwifery conducted with the aid of these agents. The mode of applying chloroform in the lying-in chamber recommended was that which is adopted now by all the chief obstetric practitioners in Europe and America with whom the author has personally communicated on the subject. In midwifery practice, the error of using "mixtures" of ether and chloroform was explained, as a patient supposed to be inhaling a mixture is in reality inhaling pure ether, and there is a danger of confusion arising in mistaking one anæsthetic for the other. A new anæsthetic of chloroform and ergot mixed was also mentioned. Cases of twins, where the second child presents with an upper extremity, "the pains severe and continuous, so that it is next to impossible for the accoucheur to introduce his hand to turn the child," were first described, where chloroform is invaluable, if there be no contraindication of diseased

heart, etc. The several indications in undilated os uteri for tartar emetic, liquor opii, or chloroform, from the result in actual practice, were explained. Next those cases of twins were pointed out where at one particular stage it is judicious to allow an interval of rest to the uterus; here ammonia and ergot act like a charm; not that chloroform is injurious, but it requires to be given before or after ergot, and not at the same time. The author said that if in journals half the attention were given in fact to these points that is given to quack compounds of chloroform, all would be right. As in some cases of twins, so is it in some cases of "tedious labour;" the patient requires an interval of rest to renew reflex action, and remove the effect of exhaustion, "false pains," emotions of a depressing kind, sleeplessness, etc. Thus, an inexperienced or constitutionally delicate young woman, with her first or second child, becomes alarmed, sleepless, etc., during her labour. Some indigestion, diarrhœa, or fright has hastened her labour before its time. The first stage of labour has been attended with suffering, followed by fatigue. Here the pains are ineffectual in advancing the labour; but if there be no diseased heart or other contraindication to anæsthetics, the author strongly advocates their administration in the manner pointed out in the memoir.

How does sleep during labor differ from anæsthesia? Sleep, according to the author, occurs only where there is exhaustion of sensorial or muscular power; anæsthesia is best where there is no exhaustion; it is independent of sleep. The reflex power of Marshall Hall is the frontier or limiting line between sleep and anæsthesia; in sleep it is active, in anæsthesia absent. In tedious labor the agony and pain will not permit the poor woman to sleep. Even opium is followed but by a tedious intoxication, without sleep, for hours; but chloroform is not an intoxicant, and acts at once and quite as safely. A patient in ordinary anæsthesia may be said to be doubly asleep. This is what is wanted for a short time in this class of labours, as thus

reflex, sensorial and muscular power are renewed. Emotion also is removed out of the way by chloroform sleep; and by a confident, cheerful demeanor on the part of the accoucheur, he may effect as much in two or three hours by chloroform as he might in almost as many days by delay, and opium, and waiting for nature. Cases of versional delivery, with and without chloroform, were next minutely described and compared; cases especially of excessive sensibility of the os uteri and vagina, where the waters have long come away, and the uterus has closed with spasmodic force over the fœtal hand and arm. One well-known obstetrician has had 300 cases; and he is every year more and more satisfied with the aid afforded by chloroform. The value of versional delivery and its *rationale* were also enlarged upon, as well as the much to be desiderated probability of the abolishing of craniotomy, and of many cases where the forceps is unnecessarily and cruelly resorted to at present. Next to version cases, the usefulness of chloroform in forceps patients was explained, and directions given as to the mode of administration. Chloroform in abortion cases at the fifth or sixth month as advocated by Dr. Tyler Smith, was also dwelt on; and even in cases of placenta prævia, as administered by Professor Simpson, Denham and others. Chloroform, as facilitating delivery by means of version, has been tried with advantage to anticipate hemorrhage. Ammonia or brandy is first given, chloroform then administered, the feet brought down, and the remainder left to nature as the chloroform wears off. The treatment of particular forms of puerperal convulsion by chloroform was entered into and explained, especially its usefulness in that form common in poor unmarried women—convulsions the consequence of mental emotion, or epileptic excitement; but in the class of cases tending towards, or the result of apoplexy, and those with albuminuria, the use of chloroform or opium must be somewhat secondary, Dr. Kidd thinks, to the general treatment and general relief of the congested cerebral or spinal membranes. The

author is not favorable to the use of anæsthetics in the simple hysteric varieties of the disease, hysteria being generally one of the contraindications to the administration of chloroform. The law of tolerance of chloroform in midwifery, is not unlike that of the tolerance of ammonia, steel, bark, wine, opium, etc. All these medicines are of exceeding value where there is present shock of the nervous rather than to the vascular system. Chloroform is invaluable where there is exhaustion, debility, or shock, the result of great or long-continued pain; where there is loss of nerve force, or convulsions from excess of reflex irritability or pain, or mental emotion or excitement, etc. But chloroform is of less importance, as even wine, bark, iron ammonia, etc., are of less use, where there is exhaustion, the result of hemorrhage, hectic, diarrhœa, exhausting suppuration, etc. Such diseases as chorea, asthma, hooping-cough, tetanus (not unlike puerperal convulsions,) are blotted out by chloroform, no matter how apparently weak the patient may seem; but it is different with debility from hemorrhage or diarrhœa. The author's further experience of chloroform, in operation cases of craniotomy, vesico-vaginal fistula, ovariotomy, enucleation of uterine tumors, etc., in which he has administered it largely, was, in conclusion, recited.

In the discussion which followed the reading of this paper, Dr. Gream said that, from some observations which had been made, it might be inferred that chloroform was but little used in midwifery in London; but he was sure that in no place was it more extensively employed, and he could positively state that amongst the upper classes it was almost universally employed, but with a general feeling of abhorrence of anything like intense insensibility. Surprise had been expressed by Dr. Barnes at the statement that so large a number of cases had occurred in which chloroform had been used in midwifery without accident; but there appeared to be no difficulty in understanding this, for it should be remembered that it was never right, nor was it required,

to carry insensibility so far as in surgery; and he (Dr. Gream) was sure that all the fatality which had attended the exhibition of chloroform in midwifery had arisen from some little want of care, or from a want of appreciation of its power. When anæsthesia was first introduced, he had opposed, with others, the indiscriminate use of it, for he thought that at that time it was recklessly employed; and he believed that the present safe and efficient manner in which it was exhibited in London was the result, in a great measure, of the opposition offered to its former indiscreet and dangerous employment. It was a fact that no death from chloroform in midwifery had occurred in London; but allusions having been made to two authorities "beyond the Tweed," it was right to state that there the same immunity from calamity had not been enjoyed; yet he felt sure that no agent could be more safe, and none more beneficial, than chloroform in midwifery, when properly administered. He thought the author of the paper had unintentionally exaggerated the ill effects (if there were any,) and also the good effects, of chloroform. For three reasons, he (Dr. Gream) thought chloroform most beneficial in labour; it removed pain, it rendered turning more easy, and it facilitated recovery; while the only detrimental effect was in protracted labour with pelvic contractions, where, by lengthening the intervals between the uterine pains, and slightly diminishing uterine power, it might cause delay; but its advantages in all other respects made full recompense for this one drawback. In instrumental delivery of every kind it was most advantageous, and he had seen fewer cases of hemorrhage since he employed chloroform; indeed, he had exhibited it to patients who had habitually been subject to this occurrence, without hemorrhage supervening—a fact worthy the attention of theorists, but nevertheless a fact. Each person had his own way of administering chloroform. He had tried several plans, but of late years he had employed a common tumbler, in which he placed the chloroform, together with a clean pocket-hand-

kerchief moistened with about two drachms of the fluid. This quantity ought to last two hours or more. The patient's face projected over the side of the pillow, and the nurse or the husband (strictly under his direction) placed the tumbler under her nose and mouth, at a distance of about an inch and a half or two inches, and thus the vapour rose perpendicularly towards her. She soon expressed a sense of giddiness; but the tumbler was still retained, until there was nearly an inability to answer any simple question put to her, and that should be the point beyond which no advance should be made. The chloroform should be now removed, and be replaced in a few minutes; and by thus being replaced and removed from time to time, while the pulse is felt and the respiration watched, a labour might be conducted through its stages without danger and without pain. He had never, during the number of years he had used chloroform, had one moment's anxiety as to its effect upon any patient to whom he had administered it. The object of the handkerchief in the tumbler was to prevent any chloroform from running out or escaping on the bed if the tumbler fell over. He had found that any handkerchief or machine with which it was necessary to touch the face had the effect of rousing the patient, and thus did harm.

Dr. Druitt said that he believed there were very few labours in which chloroform might not be used with benefit at some stage or other; and that even when all the earlier stages go on easily and well, it is the greatest comfort at the final moment when the head emerges from the outlet. He did not believe that the chloroform predisposed to hemorrhage; on the contrary he knew women who had flooded severely in early labours, when they had no chloroform, and who had been confined under chloroform subsequently without hemorrhage. Neither does it seem to retard uterine action after the first inhalation or two, provided that it be used in the small doses which reason dictates; nay, it removes that obstacle to uterine action which

is created by excessive sensitiveness of the orifice and passages, and which causes uterine action to be abortive. He knew a case in which, after a very slight inhalation—enough to tranquilize, but not stupefy—the head was driven through, with rupture of the perineum, that external sensitiveness having been allayed which is a bar to uterine action. In cases of protracted labour from rigidity, such as happen to robust women who marry rather late in life, the blessing of chloroform was incalculable. These were the cases formerly treated by bleeding, tartar-emetic, and opium; and, in opposition to the author, both opium and emetic tartar, in minute doses, were admirable adjuvants in the proper cases. No amount of torture equalled that which many women endured from excessive uterine action and quasi-inflammatory rigidity of the os, and chloroform agreed well with any other proper remedy that might be devised. The only reservation he would make was, that chloroform should be used in the minutest quantity and the minutest quantity sufficed. Two drachms were enough in most labours, a few drops at a time, to imitate the normal condition of labour; that is, a short snatch of refreshing sleep at the end of every contraction, and a little drowsiness beyond. He had met with two cases in which a very small quantity of chloform produced symptoms of angina pectoris in women whose hearts were weak, and in such cases he thought that the risk ought not to be run.

Mr. Tyler Smith agreed with nearly all that had fallen from the previous speakers in favor of chloroform in obstetric practice. He thought that it might be laid down as a principle in regard to its employment that, besides its value in allaying pain, it was useful in all cases, especially in operative midwifery, where it was desirable to moderate excessive action of the uterus, and to promote dilatation and relaxation. He held, on the other hand, that it was contraindicated in cases where there was deficient action of the uterus—as in feeble and tardy labour from inertia, and in cases where hemorrhage was expected. He had seen it

stop the course of labour midway, and he believed that post-partum hemorrhage and retention of the placenta occurred more frequently after its use than without it. One good effect of the discussion on the present paper lay in the difference of opinion which had been elicited. The causes of these differences would be studied, and the truth brought out. It could not possibly be correct that chloroform relaxed the uterus so as to facilitate turning, and made it contract so as to increase the difficulties of this operation; or that it could both cause and prevent hemorrhage. He had himself no doubt of its usefulness in difficult cases of turning. He had met with cases in which version had been accomplished by its aid, where without it the operation would have been utterly impossible. He had seen mania follow its employment, and he thought that in some cases the relation was that of cause and effect. He had also met with bad cases of rupture of the perineum under its use. The patients were relieved from pain, but volition was not suspended, and under these circumstances the violent and fearless straining efforts ploughed up the perineum by the fœtal head in the expulsive pains. It was of very great consequence to lessen, as far as possible, the dangers attending the use of this great and beneficent agent. The influence of fatty heart, alcoholism, and other conditions, in fatal cases, had been much debated; but there was one source of danger which, so far as he was aware, had not been dwelt upon. He referred to idiosyncrasy. He had known patients affected to a poisonous extent by ordinary doses of ether or chloroform. He knew two ladies, in apparently good health, in whom a few drops of chloroform would at any time produce repeated fainting. He suspected, therefore, that some of the inexplicable cases of death from chloroform depended on idiosyncrasy, and, before its administration, it would be useful if patients were tested as to their tolerance of its effects.—*Medical Times and Gazette.*

Reviews and Editorial.

Under the head of Reviews we have nothing to send forth to the patrons of the North Carolina Medical Journal. The chances of war have cut off our usual supply of Books and Monographs and exchanges from the north; while Bookmaking and even Journalizing at the South have been abandoned for the more stirring realities and sterner necessities of the times. Those among us accustomed to use the graceful, sharp nibbed pen, or to speak in flowing sentences of science, art and literature, have, at their country's call to arms, hastened to the tented field, prepared for the fierce conflict and shock of armed men, determined to do or die in defence of all that is held dear and honorable among men; while the gentler sex, God bless them, whether mothers, wives, daughters or sisters, have engaged systematically in what may be called emphatically *labors of love*, to encourage and comfort the armed men who have so suddenly rushed to the field of battle. Their instinctive perceptions of virtue and angelic sympathies led them to discern the *truth and justice* of our cause, and *faithfully* to hope for its ultimate triumph, long before many of our leading men, by their slow philosophic and more selfish processes of elaboration *could realize its rightful proportions or determine its probable results.* Such are the southern women, "*holy, divine, good, amiable and sweet;*" beings who are working with unparalleled devotion, systematically preparing, collecting and forwarding clothing, hospital dresses and other stores and supplies for the sick and wounded of our army. Like the Spartan mothers of old, they encourage their fathers, husbands, sons and brothers to hasten to the defence of their country's liberties. Can the rights and honor of such a people perish in the conflict? No, never; for never before

was there such an army sent to the field—never one urged on by such noble impulses of patriotism, and inspirited by such soul-stirring and holy considerations of duty! *Such a cause cannot, because it must not, fail!*

The preparations for war during the short period that has elapsed since hostilities broke out, are incredible in extent and completeness. Every class, profession and trade is animated by one patriotic impulse, to defend our altars and maintain our rights and our honor at every hazzard of fortune and of life. The medical profession contributes liberally, and of its best material to make up this army. In some instances medical men are chosen commanders of companies. In others we find them in the ranks doing the duties of privates, when they are fully capable of discharging those of Surgeons and assistant Surgeons. Most, perhaps all of those in the ranks, made application for the situation of surgeon or assistant surgeon, thinking they could render more effective service to the State in the line of their profession, than in the character of a common soldier. In coming to this conclusion they were doubtless correct. But then all could not be either surgeons or assistant surgeons. There were more applicants than places to be filled, and of course some must fail. But we have yet to learn of the first man among them, who afterwards flinched from the discharge of his duties as a common soldier, notwithstanding they are more capable of using gracefully either a scalpel or a pen, than they are of handling a musket. This speaks volumes in praise of their patriotism, their pluck and their powers of endurance. We have heard it said in disparagement of the profession that there was a complete Regiment, in numbers, of Doctors applying for commissions in the army. This may be true; but if so, it is no discredit to the profession since it has occurred in the manner, and been followed by the consequences, already mentioned. In proof of it, we hazzard the assertion that there is in every Regiment formed and equipped for service, more Doctors in the ranks as common

soldiers, with Diplomas in their pockets, than there are commissioned surgeons. Can this be said of other professions, or even of any one of the mechanic arts, where the members of it are cultivated and intelligent persons? No, it cannot; and never since the crusades of the middle ages, has any *class* been inspired with such enthusiastic devotion to a holy cause. We know of several instances where physicians have quit, for a surgeons place in our army, professional employment worth two or three times as much as their new position. And again, we know other physicians in the same ranks, who possess so much mental calibre, and are made of such pure metal that they will be sure to inscribe their names high in the temple of fame, should the war last long and the opportunity offer. Yet Mr. President Davis has thought proper to discredit the pretensions of our medical men to be fit *custodians* of the lives and limbs of our army. "Your Doctors," he says, "may be very good country physicians; but they are unfit for army surgeons." And thereupon, he claims the right to appoint surgeons to our Regiments, notwithstanding their officers are appointed by our Governor under a special law of our legislature, and notwithstanding also, by special appointment they are made Regimental and not staff officers, thus placing them upon the same footing with the other regimental officers, and constituting them a portion of the Regimental organization, which by the laws of the land belongs to the State authorities. He has, therefore, in our judgment, assumed a power he has no authority to exercise; and we shall presently show that he has underrated the value and patriotism of the medical mind of North Carolina. Indeed, we regard either view of this subject, as derogatory to the dignity and honor of North Carolina, prejudicial to her best interest as a sovereign State, in utter disregard of the rights and patriotic impulses of an intelligent and valuable class of her citizens, and in plain violation of a late law of the General Assembly of the State in this case made and provided, and of the Constitution of the Confederate States.

The late lamented Marshal Hall is reported to have said, after visiting this country, if he was compelled to undertake an expedition by land or sea, and had to depend on one medical man for relief under such circumstances from all the ills that flesh is heir to, he would take an intelligent, cultivated medical gentleman from one of the small towns or villages in the southern States. He would not treat you, in pure matters of surgery, as well or dexterously as Sir Benjamin Brodie, Mr. Liston or Surgeon Guthrie; nor would he in obstetrical cases prove to be quite as *au fait* as Ramsbotham, Lee or Blondel; nor perhaps so learned on the subject of the theory and practice of medicine as Watson, Stokes or Lyons; but he would treat you well and very generally with success, no matter what was the matter with you, and certainly with more success than either of those gentlemen would, save in his own special branches. This was truthful and sagacious, and we believe he might have added, that, as practitioners of medicine, in the treatment of fevers and their kindred affections, as found in our country, they would prove to have no superiors among the Stoke's, Watson's and Lyons', or any of the learned professors of the theory and practice of medicine in the Northern schools. Hundreds of cultivated and intelligent physicians in North Carolina belong to this class of men. They have had to do surgery and practice obstetrics as well as medicine during the whole of their professional life, and most of them of fifteen years standing have seen and done more surgery than the army surgeons in this country of equal years, and certainly more than any of the younger ones. Yet our Doctors are unfit for army surgeons! Credat Judeus apella; non ego.

We have had four complete Regiments in the field for weeks past, composed in no small degree of men from the high, hilly and mountainous portions of our State, which are stationed in the paludal or tide water districts of Virginia, and we have not averaged a loss of one in a thousand from the diseases incident to camp and hospital life.

We have also had for weeks more than fifteen thousand troops in the different camps of instruction in the State, and so far we have not averaged one death in two thousand, notwithstanding it is a well ascertained fact that much the greater portion of the mortality of armies belongs to hospital and camp life, and does not result from wounds received in battle. We will not say there has not been a great deal of sickness among our soldiers; for such an assertion would be untrue. But we do say, without the fear of contradiction, that we have enjoyed most extraordinary exemption from mortality, under circumstances where it might reasonably have been expected. Our army is made up of the best material in the world. Men accustomed to all the comforts and conveniences of life, have gone into this movement with alacrity, and fare as the common soldier. This necessarily changes their habits entirely, and subjects them to the evils of a soldiers life, just in the proportion of the change in their mode of living as compared with the habits of those men who generally compose armies. Lyons, Pathologist in chief to the British army in the Crimea, and professor of the theory and practice of medicine in Dublin, says: "It is in the midst of war's mingled triumphs and alarms when the pride of the insulted honor of nations, or the love of conquest pits against each other the flower of their youth on the battle field that disease and preeminently febrile disease makes most havoc. To take no other example, I should be justified in saying, that considerably more than half of the whole of the deaths of that splendid army of three hundred thousand men which France supplied in the late Russian war, was caused by fever or diseases secondary to fever." He further says, that from the 1st of Sept. 1854, to April 1855, there perished in the hospitals of Scutari alone 4,228 men; and that out of these, only 358 died of wounds. Thus the subject of the theory and practice of medicine, as properly belonging to the army, becomes a matter of serious reflection, both with those of our profession who have sought and obtained the

responsible office of army surgeon, and with those who exercise the appointing power. "'Tis not all" of a surgeon's duty to amputate a limb and tie up an artery. We have known of one instance and heard of another in our State, where a plain but intelligent farmer took off a leg above the knee with a spanish windlass, a carving knife, handsaw and a knitting needle sharpened and bent at the end, and the *patient* got well without a bad symptom. Thus, while surgery in its strict technical sense is necessary, still the acquirements of the physician are more so, and will be oftener called into requisition.

Hear what this same Lyons, Crimean surgeon and Dublin professor, says about army surgeons. He thinks "a few months" experience will enable "a junior assistant surgeon to wield the knife with all the skill, the dexterity, and the firmness of a practised operator;" but that "nothing can supplement the want of an early and systematic training in the pathology and therapeutics of fever." Now our medical men are familiar with all the diseases of the Southern States, with the pathology and therapeutics of "*fever or diseases secondary to fever*," which is proven by their ability to conduct *Twenty Thousand Troops* through many weeks of hospital and camp life, under an ardent Southern sun, without losing *one in a thousand.* Therefore, it must be admitted, *a fortiori*, that they are well fitted to be army surgeons, at least for our troops, maugre the opinion of our good President, who is without doubt a wise Statesman and a perfect thunderbolt of war, but, as we happen to know beyond a doubt, *rather a poor judge of Doctors.*

Our position as a member of the State Medical Society and member of the Board of Medical Examiners for the State, as Editor of the North Carolina Medical Journal and Surgeon General of the military forces of North Carolina makes it our bounden duty to defend the medical men of North Carolina against unmerited disparagement whencesoever it comes, and to place their professional qualifications for the places of surgeons and assistant surgeons in our army, and their patriotic impulses as loyal sons of the

South and citizens of this State, in a proper point of view. In this article we have aimed at nothing more, and we could not conscientiously do less.

Eheu jam satis! the reader exclaims. But read on. There is another interest of paramount importance involved in the consideration of this question of Regimental organization of our troops. What is the great foundation principle that underlies this whole Southern movement? that has hurried thousands upon thousands of armed men to the field of battle? that has made almost every man and boy in the land a soldier? Is it not States rights? We have certainly so understood it. Then let all the constituted authorities of the State see to it, that the political rights and civil liberties of the people are not sacrificed to what may be considered the pressing necessities of the times, and the *urgent requirements of the moment*, by suffering the State to drift into the Briarean arms of the man on Horseback.

Excerpta.

Whooping Cough.—For this disease, Dr. Benson, of the Louisville *Journal* recommends the following:

℞.—Acid Hydrocyan.		gtt. vi.
Ext. Belladonna.		grs. ii.
Tinct. Opii Camph.		ʒ iij.
Syr. Bals. Tolu.		℥ ij.
Aquæ Font.		℥ iij.

Misce. S. One teaspoonful four times a day.

Strychnine in Typhoid Fever.—Prof. N. S. Davis, of Chicago, advocates the use of this remedy: particularly so, in cases having a tendency to rapid prostration. The following is the combination in which it was given:

℞.—Strychnine,		gr. i.
Nitric Acid,		ʒ i.
Tr. Opii,		ʒ ij.
Water,		℥ ij.

A teaspoonful to be given every hour.

Chlorate of Potassa in Gonorrhœa.—Dr. Irwin, U. S. A., in the *Medical and Surgical Reporter*, in speaking of the use of this remedy, says, "I have found it to be such an admirable remedy that I seldom resort to any other in the treatment of urethral inflammation. · My method of using it is as follows: one drachm of the salt dissolved in eight ounces of water, of which an injection is given every hour for twelve hours, at the end of which time, the discharge will have become changed and diminished, allowing the remedy to be gradually discontinued until the second or third day, when the disease will be generally found to have ceased."

Glycerine as a solvent for Belladonna.—M. Foucher recommends this solvent, instead of water, for the purpose of applying it around the brow to produce dilatation of the pupil. The extract is thus prevented from drying into a hard crust, and a greater certainty of absorption of the narcotic is insured.

(This would also be a good form for applying belladonna to the breast for the purpose of arresting the secretion of milk—one or two drachms of belladonna rubbed up in an ounce of glycerine and smeared over the breast: the addition of thirty or forty grains of camphor would be beneficial.—Eds. St. Louis Med. & Surg. Jour.)

Physicians in the United States.—According to the Nashville Medical Journal, the number of physicians in the United States (as heretofore comprised) amounts to 40,481. In North Carolina there is one physician to 802 inhabitants. This fact may be of interest to recent graduates.

How to Improve the Taste of Cod Liver and Castor Oils.—The Louisville Medical News says: "Cod-Liver or Castor Oil, shaken up with an equal volume of water distilled from the leaves of the wild cherry tree, in a manner similar to that directed for cherry laurel water, and left to rest for forty-eight hours before separation, acquires by this simple operation an extremely sweet perfume and agreeable taste

of almonds; the taste remains so long as the digestion lasts. Castor oil is not affected in its purgative action by this process."

Dyspepsia.—The Medical and Surgical Reporter gives the following prescription used by Prof. Pepper with advantage as a carminative, &c., in dyspepsia: ℞. Creasote, gtts. x. Sodæ Carb. ʒ ij. Tr. Zingiber, ʒ i. Tr. Cardamon, ʒ i. Saccharum. Alb. ʒ ij. Aqua Cinnamon, ʒ vi. Dose. A teaspoonful three or four times a day.

Dysentery.—Dr. Jackson in the Boston Journal recommends the following formula for dysentery:

℞—Glauber salts.	ʒ i.
Water,	ʒ iij.
Nitric acid,	
Muriatic acid, *aa.*	ʒ i.
Alum,	℈ ss.

M. S. A large tablespoonful occasionally.

A Pathognomonic symptom of Scarlatina.—Dr. Bourchut, points out a curious sign which assists in the discrimination of scarlatina from measles, erythema, erysipelas, etc. It consists in a vascular phenomenon, proportionate in intensity to the extreme contractibility of the capillaries; he refers to the enduring *white stripe* produced at will by drawing the back of the nail over the part of the skin in which the eruption exists. Pressure with the nail, or any other hard substance upon the exanthematous surface, produces a white streak which lasts one or two minutes, and sometimes more. This phenomenon (an uninterrupted white streak) is observable in scarlatina only.

MINUTES

OF THE

TWELFTH ANNUAL MEETING

OF

THE N. C. STATE MEDICAL SOCIETY.

HELD AT

MORGANTON, N. C., MAY, 1861.

MORGANTON,
May 8th, 1861.

The Medical Society of the State of North Carolina held its twelfth annual meeting in the town of Morganton. The President, Secretary and Treasurer being absent, Dr. J. J. Summerell, the first Vice President, took the chair and called the Society to order. Dr. W. H. McKee was appointed Secretary, and Dr. J. Graham Tull, Treasurer, pro tem.

The following permanent members were present: Drs. J. H. Dickson, J. G. Tull, W. H. McKee, C. Happoldt, O. F. Manson, J. J. Summerell, R. L. Payne, W. R. Sharp, J. M. Happoldt, W. A. Collett, Hugh Kelly. Drs. Sharp, Manson and Kelly were appointed a committee on Credentials, and reported the following gentlemen as permanent members of the Society:

Dr. W. W. Gaither,
" W. C. Tate,
" H. R. Curtis,
" R. C. Pearson,
" P. A. Barrier,
" J. C. Gidney,
Dr. H. W. Tate,
" Calhoun Hill,
" J. T. Fuller,
" J. M. Lowing,
" R. A. Shinpock.

It was ordered that the members who were just elected permanent members of the Society should sign a copy of

the Constitution and By-Laws, and have their names transferred to the Journal by the Secretary on the book containing the same, as it was not present. They then came forward and signed a copy of the Constitution and By-Laws as required.

The following members were elected a committee on nominations: Drs. Tull, Manson, Dickson, J. M. Happoldt, Kelly, Hill, Gaither, Sharp, Payne, and Curtis. The committee on nominations submitted the following report:

For President,
Dr. J. T. Summerell, of Salisbury.

For Vice Presidents,
Dr. J. M. Happoldt, of Morganton.
" W. R. Sharp, of Davie,
" J. B. Hughes, of New Bern,
" R. L. Payne, of Lexington.

For Secretary,
Dr. W. G. Thomas, of Wilmington.

For Treasurer,
Dr. C. W. Graham, of Kenansville.

For Orator,
Dr. M. Whitehead, of Salisbury.

The committee declined to nominate members to the American Medical Association.

Respectfully submitted,
J. G. TULL, *Chairman.*

Adjourned until 9 o'clock, A. M.

Morganton,
May 9th, 1861.

The Society met according to adjournment. When the President, elect, Dr. Summerell returned his acknowledgments to the Society for the compliment paid him in being

selected as their presiding officer for the next year, and still pledged his devotion to its farther aid, in promoting its future success.

The members were called upon for reports from their respective counties. Dr. C. Happoldt read an interesting report from the county of Burke, which elicited an elaborate discussion from the physicians of his county. Dr. R. L. Payne, of Davidson county, also read a paper on the diseases of his county, giving quite in detail the various accounts of the epidemics and treatment of the diseases, as well as the changes which occurred under his immediate observations during the last year. Dr. Kelly, of Iredell, made a report upon diphtheria, as it prevailed in the immediate neighborhood of Statesville. Dr. Sharp of Davie also reported upon the thermal changes which had taken place for the last four years in his county, and requested an expression of opinion relative to the causes of those changes and the effect produced upon the type of disease as now existed from that of former years. Dr. J. M. Happoldt, of Morganton, entertained the Society with an interesting case of vernal asthma, as it prevailed annually in his own person. This, with the other reports, were ordered to be published in the Medical Journal.

Dr. McKee introduced the following resolution, which was unanimously passed.

Resolved, That the Treasurer of this Society be instructed to pay over to the Editors of the North Carolina Medical Journal, such sums of money which he may have in his hands, from time to time, after defraying the ordinary expenses of the society, so as to enable them to carry on its publication—provided, that the Journal should not be able to sustain itself, and that the Editors are authorized to draw the same upon their statement; and that the assessment for the present year be two dollars upon each permanent member and county society.

The President made the following appointments to report on the epidemics and diseases of their respective counties at the next meeting of the Society.

COUNTIES.	NAMES.
Burke,	Dr. C. Happoldt.
Craven,	" J. B. Hughes.
Washington,	" J. L. F. Long,
Edgecombe,	" J. W. Jones.
Pitt,	" C. J. O'Hagan.
Warren,	" Frank Patterson.
Wilson,	" W. J. Bullock.
Hertford,	" J. W. Hutchings,
Davie,	" W. R. Sharp.
Iredell,	" W. M. Campbell.
Rowan,	" J. G. Ramsay.
Anson,	" E. F. Ashe.
Cleaveland,	" Thos. Williams.
Cabarrus,	" L. S. Bingham.
Davidson,	" R. L. Beall.
Guilford,	" J. K. Hall.
Randolph,	" W. H. H. Conner.
Montgomery,	" R. A. Shinpock.
Mecklenburg,	" J. W. Caldwell,
Catawba,	" H. R. Curtis.
Halifax,	" A. R. Pierce.
Tyrrell,	" G. W. Hodges.
Franklin,	" W. C. Lankford.
Richmond,	" O. Hadley.
Chowan,	" R. H. Winborne.
Pasquotank,	" J. M. Butt.
Camden,	" R. B. Tabb.
Perquimans,	" David Cox.
Gates,	" J. F. Manning.
Orange,	" Wm. Strudwick.
Wake,	" B. F. Graham.
Duplin,	" H. W. Faison.
Sampson,	" Thos. J. Boykin.
Granville,	" Eugene Grissom.
Wayne,	" Chas. Dewey.
Lenoir.	" J. Bryant.

COUNTIES.	NAMES.
New Hanover,	Dr. W. H. Hall.
Beaufort,	" Wm. Cramer.
Greene,	" Ira Scarboro.
Johnston,	" John S. Leach.
Currituck,	" L. M. Bell.

The President, in behalf of the physicians of Morganton, extended an invitation to the members of the Society to a party to be given at night at the Mountain House.

On motion of Dr. Manson, the invitation was accepted, and the thanks of the Society returned.

Invitations to hold the next Annual meeting of the Society were presented by several members. The one from Wilmington was unanimously accepted.

The President appointed the following gentlemen as a Committee of arrangements:

Dr. W. G. Thomas,	Dr. W. W. Harris,
" J. H. Dickson,	" E. A. Anderson,
" W. H. Hall,	" A. Medway.
" J. F. McRee, jr.	

On motion of Dr. Manson, the usual resolutions of thanks were passed presenting to the President and Directors of the different Railroad companies, for their courtesy in passing at half price, the members of the Society who were in attendance upon the meeting; also to the Committee of Arrangements, the members of the profession, and the citizens of Morganton, for the hospitality and agreeable attentions shown to the members during the annual meeting.

It was ordered that the minutes of the proceedings of the Society be published in the Medical Journal.

On motion, the Society adjourned to meet in the town of Wilmington, on the second Wednesday in May, 1862.

J. J. Summerell, *President.*

W. H. McKee, *Secretary pro. tem.*

CONSTITUTION

OF THE

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA,

As amended at its eleventh Annual Meeting, April 1860.

ARTICLE I. — *Title of the Society.*

The title of the Society shall be "The Medical Society of the State of North Carolina."

ARTICLE II.—*The Objects of the Society.*

The objects of this Society shall be the advancement of medical knowledge, the elevation of professional character, and the promotion of all measures of a professional nature that are adapted to the relief of suffering humanity, and to improve the health and protect the lives of the community.

ARTICLE III.—*Members of the Society.*

SEC. 1. This Society shall consist of Permanent Members, Delegates, Associates, and Honorary Members.

SEC. 2. The Permanent Members shall consist of such regular Physicians as shall be admitted on motion of a Member: *Provided*, he receives two-thirds of the votes present; and the Member thus admitted shall be entitled to all the privileges of the Society. He must first sign the Constitution and By-Laws, and pay the assessment.

SEC. 3. The Delegates shall receive their appointment from the County Societies, and from the Counties that have no Society a delegate may be appointed by the Profession of the County: *Provided*, they have as many as two regular Practitioners within the County.

SEC. 4. Every Delegate, before admission to a seat in the Society, shall produce a certificate of delegation, signed by the President or Secretary of the County Society or Association, and shall sign the Constitution and pay the assessment.

SEC. 5. Each Delegate shall hold his appointment for one year, or until another is appointed to succeed him.

SEC. 6. Every member of a County Society shall be an associate member of the State Medical Society.

SEC. 7. An associate member shall be entitled to all the privileges of attending upon the deliberations of the Society, and take part in its discussions, but shall not be allowed to vote, nor shall he be eligible to office.

ARTICLE IV —*Of the Officers.*

SEC. 1. The officers of this Society shall be a President, four Vice Presidents, a Corresponding and Recording Secretary, and Treasurer.

SEC. 2. At each annual meeting the Society shall elect by ballot one member from each County represented, who shall constitute a Committee on nominations, whose duty it shall be to nominate the officers of the Society, delegates to the American Medical Association, orator and honorary members, and report the same for the action of the Society.

SEC. 3. The report of the said Committee shall be decided by vote, *viva voce*, and the officers, delegates, and orator so elected, shall serve for one year, or until others are elected to succeed them.

SEC. 4. None but permanent members and delegates shall be eligible to the office of President, Vice President, Secretary and Treasurer.

ARTICLE V.—*Duties of the Officers.*

SEC. 1. The President shall preside at the meeting, preserve order, and perform such other duties as custom and parliamentary usage may require. He shall not be eligible for two terms in succession.

SEC. 2. The Vice Presidents, when called upon, shall assist the President in the performance of his duties, and during the absence, and at the request of the President, one of them shall officiate in his place. They shall not be eligible for two terms in succession.

SEC. 3. The Corresponding and Recording Secretary shall conduct the correspondence, and perform such other duties as usually appertain to that office; and shall keep correct minutes of the proceedings of the Society, and shall fairly transcribe the same, when approved, in a book kept for that purpose. He shall have charge of all papers belonging to the Society, other than those appertaining to the Treasurer; and shall give due notice of the annual meetings; and shall receive such compensation as the Society may from year to year determine.

SEC. 4. The Treasurer shall receive all moneys belonging to the Society, and give receipts for all sums paid into his hands to the individual paying the same, and disburse them as directed, preserving vouchers for the same. He shall annually present a statement of the finances to the Society, which shall be referred to a committee of three delegates, to be audited.

ARTICLE VI.—*Of the County Societies.*

SEC. 4. The members of the profession in any County of this State, who form themselves into a County Society, may become auxiliary to this Society: *Provided*, That all the regular practitioners in the County have been invited to unite in its organization; *and*,

provided, that the constitution and laws of such Society do not contravene those of the State Society.

SEC. 2. No one shall be admitted as a member of the County Society, unless he is either a graduate in medicine of some respectable Medical School, or has been a practitioner for at least five years; and who, moreover, is in good moral and professional standing in the place where he resides, and is a regular practitioner.

SEC. 3. Any physician who shall procure a patent for a remedy, or instrument of surgery, or who shall hereafter give a certificate in favor of a patent remedy, or instrument, shall be deemed disqualified from becoming a member of a County Society.

SEC. 4. As soon as the County Society is organized, the Secretary thereof shall transmit to the Corresponding and Recording Secretary one copy of the Constitution and By-Laws, with the names of their officers and members. The Society shall be authorized to elect one delegate to the State Society for every five of its members.

SEC. 5. Every County Society shall enforce the observance by its members of the Code of Ethics adopted by the State Society, and they shall be authorized to censure or expel any member convicted of violating its provisions.

SEC. 6. A member of the County Society who is censured or expelled, shall have a right to appeal to the State Society.

Sec. 7. A member who is expelled, shall be debarred from the rights of consultation, or the privileges of professional intercourse with any member of the State Society.

SEC. 8. The County Societies shall report annually to the State Society a list of their officers and members, any new rules which they may adopt, and such other matters as they may deem interesting.

SEC. 9. The County Society shall hold at least two meetings in each year.

SEC. 10. If any County Medical Society shall neglect to perform all such acts as may be required to be done by the laws of the State Society, or shall be guilty of conduct derogatory to the honor of the Medical profession, or shall oppose or neglect to comply with the laws of the State Society, such county shall during such delinquency, have their privileges, as a portion of the State Society suspended, and their delegates shall not be entitled to a seat in the State Society.

ARTICLE VII.—*Meeting of the Society.*

The Society shall hold an Annual Meeting. The time and place of meeting shall be determined, for each succeeding year, by a vote of the Society.

ARTICLE VIII.—*Of the Funds of the Society.*

SEC. 1. Funds for defraying the current expenses of the Society shall be raised by assessments on permanent members and County or District Societies in connection with the State Society.

SEC. 2. Each permanent member, after being duly elected and having signed the Constitution, shall pay the sum of five dollars as an admission fee, and subject to the annual assessment of the Society, with the exception of the assessment for the year of his admission.

SEC. 3. Should a permanent member fail to pay the assessments two successive years, after having been notified by the Treasurer of his delinquencies, his name shall be stricken from the list of members.

SEC. 4. Each County or District Society shall pay, through the hands of its Delegate or Delegates, the annual assessment; and in case such County or District Society is not represented, it shall be the duty of the Treasurer to forward an account of said assessment to the Secretary or Treasurer of the County or District Society for collection.

SEC. 5. Should a County or District Society, in connection with this Society, fail to pay the annual assessment two successive years, after having been notified by the Treasurer of its delinquencies, its right of representation in this Society shall be suspended until said assessments are paid.

ARTICLE IX.—*Code of Ethics.*

This Society adopts, as a part of its regulations, that part of the Code of Ethics of the American Medical Association, which it has published by its order,

ARTICLE X.—*Provisions for Amendments.*

Every proposal for altering or amending this Constitution shall be made in writing; and if such alteration or amendment receives the unanimous vote of the members present, it shall be adopted; but, if objections be made, the alteration or amendment shall lie over until the next annual meeting, when, if it receives the vote of two-thirds of the voters present, it shall be adopted.

RULES OF ORDER.

1. The President, or in his absence, the Vice President, shall call the Society to order; or in case of the absence of all these officers, a Chairman shall be appointed, *pro tem.*, for the purpose.
2. The appointment of a Committee to examine the Credentials of Delegates.
3. The Report of the above named committee.
4. Calling the Roll.
5. Election of Officers.
6. Resolutions introducing new business.
7. Reading the Minutes.
8. Any business which requires early consideration may, by permission, be introduced.
9. Reports from the County Societies.
10. The Correspondence shall be read by the Corresponding Secretary.
11. Written Communications on Medical subjects may be read and discussed.
12. Oral Communications may be made and discussed.
13. Tha selection of a place for the next meeting of the Society
14. Unfinished and Miscellaneous business.
15. Adjournment.

LIST OF MEMBERS OF THE NORTH CAROLINA MEDICAL SOCIETY.

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
1	Dr. E. Strudwick,	Orange county, N. C.	University of Pennsylvania,	Hillsboro' N. C.	April 3d, 1850
2	" J. D. Williamson,	Caswell " "	" " "	Locust Hill, "	" " "
3	" W. H. McKee,	Raleigh, "	" " "	Raleigh, "	" " "
4	" William G. Hill,	" "	" " "	" "	" " "
6	" N. J. Pittman,	Halifax county, "	" " "	Rocky Mount, "	" " "
6	" T. H. Turner,	Orange " "	Jefferson Medical College,	Hillsboro', "	" " "
7	" W. A. Norwood, (L.)	" " "	Charleston " "		" " "
8	" Johnson B. Jones,	Chatham " "	" " "	Chapel Hill, "	" " "
9	" R. B. Haywood,	Raleigh, "	Jefferson Medical College,	Raleigh, "	" " "
10	" William Webb,				
11	" F; J. Haywood,				
12	" N. L. Stith, (L.)				
13	" David A. Telfair,				
14	" A. H. Taylor,*				
15	" L. C. Manly,				
16	" C. E. Johnson,				
17	" Henry Seawell,*	Wake county, "	University of Pennsylvania,	Wake County, "	April 4th, 1850
18	" James B. Dunn,	Forestville, "	" "	Forestville, "	" " "
19	" W. H. Crenshaw,				
20	" J. J. W. Tucker,*	Raleigh, "	University of Pennsylvania,	Raleigh, "	April 3d, 1850
21	" Jas. A. McRae,	Fayetteville, "	" New York,	Fayetteville, "	" " "
22	" Wm. Geo. Thomas,	Louisburg "	" Pennsylvania,	Wilmington, "	" " "
23	" N. Mendenhall,				
24	" H. W. Graham,				
25	" O. Hooker,	Greene county, "	University of Pennsylvania,	Hillsboro', "	April 3d, 1850
26	" S. S. Satchwell,	Beaufort " "	" New York,	Rocky Point, "	" " "
27	" John R. Mercer,	Edgecomb " "	University of Pennsylvania,	Edgecombe Co., "	" " "
28	" P. T. Henry,	Bertie " "	" New York,	Windsor, "	" " "

LIST OF MEMBERS.—CONTINUED.

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
29	Dr. John Q. Anderson,	Caswell, N. C.	University of Pennsylvania,	Caswell County.	April 3d, 1850
30	C. F. Dewey,	Raleigh,	" "	Goldsboro',	" "
31	P. P. Peace,	Granville County,	" "		" "
32	E. B. Haywood,	Raleigh,	" "	Raleigh,	April 1850
33	J. R. Thompson,	"	" "	Smithfield,	" "
34	L. A. Jeffreys,*	Wake County,	" "	Franklin,	" "
35	J. M. Taylor,	Nash,	" "	Stanhope,	April 3d, 1850
36	Robert Gibbon.	Pennsylvania,	Jefferson Medical College,	Charlotte,	" "
37	Wm. M. Broocks,	Charlotte, Va.,	" " "	Milton,	April 4th, 1850
38	J. F. McRee, Jr.,	Wilmington,	University of New York,	Wilmington.	" "
39	J. G. B. Myers,	Beaufort County.	" Pennsylvania,	Washington,	" "
40	T. N. Cameron,*	Petersburg, Va.,	" "	Fayetteville,	" "
41	Jno. T. Hicks.	Wake County,	" "	Fish Dam.	May 22d, 1851
42	E. H. Crudup,	Franklin County,	" "	Franklin Co.	" "
43	J. B. Mann,	" "	Jefferson Medical College,	"	" "
44	J. L. Meares, (L.)	Wilmington,	" " "	Mississippi,	" "
45	B. C. Watson, (L.)	Philadelphia Co., Pa.	University of Pennsylvania,		" "
46	L. D. Schoolfield,	Guilford,	" New York,	Hillsboro',	" "
47	J. D. Battle,*	Franklin,	" Pennsylvania,	Everettsville,	" "
48	W. R. Miller.	Raleigh,	Jefferson Medical College,	Wake County,	" "
49	J. M. Johnston,	Yanceyville,	University of Pennsylvania,	Yanceyville,	" 12th, 1852
50	James P. Bryan,	Newberne,	" "	Kinston,	" "
51	A. B. Pierce,	Halifax County,	" "	Halifax,	" "
52	A. D. Moore, (L.)	Chatham "	" New York,		" "
53	J. Graham Tull,	Lenoir "	" Pennsylvania,	Newberne,	" "
54	Henry W. Faison,	Duplin,	" "	Duplin County,	" "
55	Elias F. Shaw,	Sampson,	" "	Sampson County,	" "
56	Robert H. Tate,	New Hanover,	Jefferson Medical College	New Hanover,	" "

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
57	Dr. Allmand Holmes,	Sampson	University of Pennsylvania,	Sampson County N C	May 12th, 1852.
58	Thomas J. Boykin,	"	" "	Clinton.	do
59	L. Frnk,	Brunswick	" "	Brunswick County	do
60	Elias K. Faison,*	Sampson	" "	Duplin county	do
61	B F. Whitaker,	Halifax	Jefferson Medical College	Enfield	do
62	D. DuPree, Jr.	Wake	University of Pennsylvania	Raleigh	do
63	John Swann,	New Hanover	Charleston Medical College	Wilmington	do
64	S. T. Iredell,	Raleigh	University of Pennsylvania	Raleigh	do
65	J. W. Hutchings,	Hertford County	" "	Murfreesboro'	do
66	William L Long,*	Halifax	" "	Weldon	do
67	Henry Joyner,	"	" "	Halifax County	do
68	Owen Hadley.	Chatham	" New York	Richmond County	do
69	William H. Moore,	"	" "	Chapel Hill	do
70	W. W. Harriss.	Wilmington	" "	Wilmington	do
71	Thomas Woodley,	Isle of Wight, Va.	University of Pennsylvania	Kinston	do
72	James H. Dickson,	Wilmington,	" New York	Wilmington	do
73	W. G. Curtis,	Hopkinton. N, H.	Harvard University	Smithville	do
74	E. A. Anderson,	Wilmington,	Yale College	Wilmington	do
75	D. B. Gillespie.	Bladen county,	Charleston Medical College	Westbrook	May 13th, 1852.
76	Louis L. Holmes,	Washington,	University of New York	Chatham County	May 18th, 1853.
77	A. D. McLean,	Robeson county	Jefferson Medical College	Robeson county	do
78	H. F. Murphy,	New Hanover	Columbia College	Teachy's Depot	do
79	G. W. Blacknall.	Granville county,	University of Pennsylvania	Henderson Depot	do
80	C. T. Murphy,	New Hanover,	Jefferson Medical College	Sampson County	do
81	C. C. Covington,	Richmond,	University of Pennsylvania	Rockingham	do
82	J. McK. Alford,	Robeson,	" New York	Alfordsville	do
83	A. M. McInnon, (L)	Richmond,	" Pennsylvania	Floral College	do
84	H. H. Robinson,	Bennington, Vt.	Virginia Medical College	Elizabethtown	do

LIST OF MEMBERS.—Continued.

No.	Names.	Where born.	Medical school.	Present residence.	Date of signing.
85	Dr. Robert Monroe	Cumberland county	Charleston Medical College	Cumberland county	May 18th, 1853.
86	B. C. Wi liams,	Moore do	University of Pennsylvania	do do	do
87	Baker W. Mabrey	Edgecombe do	do New York	Tawboro'	May 10th, 1854.
88	F. M. Garrett	do do	do do	Falkland, Pitt	do
89	J. T. Leach		Rutger's	Leachburg	do
90	Otis F. Manson		Med. Dep. H. S. College Va.	Townesville	do
91	Geo. M. Cooley		Jefferson Medical College	Raleigh	do
92	Edward Warren		University of Virginia,	Edenton	do
93	Hugh Kelly		do New York	Statesville	do
94	M. M. Murray		do do	Middleton	do
95	J. F. Tompkins		do do	Raleigh	do
96	T. L. Banks		do Pennsylvania	Wake county	do
97	E. R. Gibson		do do	Concord	May 16th, 1855.
98	A. C. McRee		do do	do	do
99	F. M. Henderson		do do	do	do
100	A. M. Nesbitt,		do New York	Salisbury	do
101	J. J. Summerell		do Pennsylvania	do	do
102	Peter E. Hines		do do	Raleigh	do
103	M. Whitehead		Medical College of Virginia	Salisbury	do
104	Robert F. Hackett		Jefferson Medical College	Wilkesboro'	May 17th, 1855.
105	James G. Ramsay		do do do	Rowan county	May 16th, 1855.
106	Henry J. Macon	Warren	University of Pennsylvania	Warrenton	May 14th, 1856.
107	J. C. Marriott	Wakefield	do do	Wakefield	do
108	H. M. Whitley	Johnston county	do do	Franklinton,	do
109	Thos. H Avera	Wake	do do	Eagle Rock	do
110	Charles T. Powe	Salisbury	do do	Salisbury	do
111	J. A. Gibson	Concord	do do	Concord	do
112	Edward C. Fisher	Richmond Va.	do Maryland	Raleigh	do

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
113	Dr.C. W. Graham,	Duplin County,	University of Pennsylvania,	Kenansvile,	April 15, 1857,
114	Wm. Strudwick,	Hillsboro',	Jefferson Medical College,	Hillsboro',	"
115	S. Davis Grice,	Portsmouth, Va.	University of Pennsylvania,	Elizabeth City,	"
116	William C. Warren,	Charles City, Va.	" "	Edenton,	"
117	Caleb Winslow,	Perquimans County,	" "	Hertford,	"
118	George H. Coke,	Williamsburg, Va.	" "	Woodville,	"
119	Thomas D. Warren,	James City, Va.,	" "	Edenton,	"
120	T. H. Wingfield,	Portsmouth, Va.,	" "	Bertie County,	"
121	R. H. Winborne,	Hertford County.	" "	Chowan "	"
122	W. G. Poole,	Pasquotank County,	" "	Elizabeth City,	"
123	James N. Butt,	" "	" "	" "	"
124	Robt. B. Tabb,	Elizabeth City Co., Va.	" "	Camden County,	"
125	Wm. H. Finlayson,	Sampson County, N. C.	Jefferson Medical College,	Goldsboro',	"
126	David Cox,	Currituck "	University of Pennsylvania,	Perquimans Co.,	"
127	J. F. Manning,	Edenton,	" "	Gates County,	"
128	S. C. Benjamin, (1)	New York,	Birkshire,		"
129	B. F. Fessenden,	Plymouth,	University of Pennsylvania,	Plymouth,	"
130	Wm. H. Speller,*	Bertie County,	" "	Windsor.	"
131	Geo. W. Hodges.	Tyrrel County, N. C.	University of New York,	Sladesville, N. C.	"
132	J. T. Smith,	Hertford,	" Virginia,	Hertford,	"
133	S. W. Street,	Maryland,	" Maryland,	"	"
134	Wm. R. Spruell,	Edgecombe County,	" Pennsylvania,	Pasquotank,	"
135	B. F. Graham,	Alamance "	Jefferson Medical College,	Wake County,	May 19, 1828.
136	Ira Scarboro,	Green "	University of Pennsylvania,	Greene,	"
137	J. M. Happoldt,	Charleston, S. C.	" "	Morganton,	"
138	S. Singleton,	Hyde County, N. C.	" "	Portsmouth,	"
139	William R. King,	Franklin "	" "	Louisburg,	"
140	N. D. Craton,	Rutherfordton,	Charleston Medical College	Goldsboro',	"

LIST OF MEMBERS.—Continued.

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
141	Dr. James A. Bizzell,	Wayne County,	University of Pennsylvania,	Clinton, N. C.	May 19, 1858
142	W. C. Lankford,	Franklin "	" New York,	Franklinton,	do
143	Wm. H. Howerton,	" "	Jefferson Medical College,	Richlands, Onslow,	do
144	W. J. Busbee,	Wake "	University of Maryland,	Wake County,	do
145	J. Dickson Pearsall,	Duplin "	" Pennsylvania.	Sampson "	do
146	John S. Leach.	Johnston, "	" "	Johnston "	do
147	James K. Hall,	Iredell "	" "	Greensboro',	do
148	S. G. Boyden,	Massachusetts,	Harvard University.	Goldhill.	do
149	Lycurgus M. Bell,	Currituck County,	University of New York,	Currituck,	do
150	John J. Wilson,	Pennsylvania,	" Pennsylvania,	Goldhill,	do
151	E. W. Ward,	Newberne,	Jefferson Medical College,	Jacksonville,	do
152	George A. Foote,	Warrenton,	" "	Warrenton,	do
153	William Cramer.	New York,	University of New York,	Beaufort,	do
154	John Shackelford,	Newberne,	" Pennsylvania,	Trenton,	do
155	A. Medway,	Hungary,	Charleston Medical Collge,	Wilmington,	do
156	Stuart White.	Raleigh,	University of New York,	New York,	do
157	Samuel E. Chapman,	Mewberne, N. C	" "	Newberne,	do
158	M. F. Arendell,	Beaufort,	" "	Beaufort,	do
159	A. S. Wiggins,	Halifax County,	" Pennsylvania,	Ringwood,	do
160	Warburton Hill.	Duplin,	" New York,	Goldsboro',	do
161	Charles H. Harriss,	Wake,	" Pennsylvania,	Earpsboro',	do
162	Alexander Taylor,*	Newberne,	" "	Newberne,	do
163	Peter Custis,	"	" "	"	do
164	A. S. Cotton,*	Edgecombe County,	" "	Wilson,	do
165	Leroy Chappel,	Wake "	" "	Kinston,	do
166	W. R. Sharpe,	Iredell "	Jefferson Medical College,	Fulton,	do
167	R. H. Shield,	Virginia,	Virginia " "	Winton.	do
168	R. G. Cobb,	Lenoir County.	College P. and S. New York.	Newberne,	do

NO.	NAMES.	WHERE BORN.	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
169	Dr. Walter Duffy,	Ireland, N. C.	Charleston Medical College	Newberne, N. C.	May 19, 1858.
170	W. T. Howard,	Virginia.	Jefferson " "	Warrenton	do
171	W. W. Davis,	Pittsboro',	University of Pennsylvania,	Wilmington	do
172	J. A. Guion,	Newberne,	" "	Newberne	do
173	James A. Miller,	Georgia.	" New York	Wilmington	19, 1858.
174	Samuel Masters,	Hyde county	" Pennsylvania	Newberne	11, 1859.
175	Eugene Grissom,	Granville county,	" "	New Light	do
176	R. L. Payne,	Lexington,	Jefferson Medical College	Lexington	do
177	William H. Hall,	Wilmington,	University of New York,	Wilmington	do
178	R. A. Chambers,	Montgomery county	" "	Pekin	do
179	J. Rhodes Tayloe,*	Washington	" "	Washington	do
180	D. T. Tayloe,	"	" "	"	do
181	T. P. Coleman,	Iredell county	University of Pennsylvania	Concord	do
182	A. A. Lawrence,	" "	" "	Statesville	do
183	Wyatt M. Brown,	Pitt county	University of New York,	Greenville	do
184	J. G. Thomas,	Franklin county,	" Pennsylvania	Cedar Rock	do
185	F. M. Rountree,	Pitt "	" "	Kinston,	do
186	Wm. H. H. Conner,	Randolph "	Jefferson Medical College	New Market	do
187	James Hickerson,	Wilkes "	" "	Briar Creek	do
188	E. B. Hampton,	" "	" "	Jonesville	do
189	T. W. Johnston,	Orange "	" "	Orange	do
190	A. Torrence,	Mecklenburg county	Charleston "	Mt. Vernon	do
191	J. W. Caldwell,	Charlotte	" "	Charlotte	do
192	R. L. Beall	Davidson county,	Jefferson "	Cotton Grove	do
193	C. A. Alexander,	Mecklenburg "		Cabarrus	do
194	L. S. Bingham,	Salisbury	Castleton Medical College	Concord	do
195	Richard R. Barr,	Rowan county	Jefferson "	China Grove	do
196	C. Happoldt,	Charleston, S. C.	South Carolina "	Morganton	do

LIST OF MEMBERS.—Continued.

NO.	NAMES.	WHERE BORN	MEDICAL SCHOOL.	PRESENT RESIDENCE.	DATE OF SIGNING.
197	Dr. Wm. A. Collett	Burke county, N. C.	Jefferson Medical College	Morganton	May 11, 1859
198	Thomas Williams	Spartanburg Dist., S. C.	Transylvania College	Shelby	do
199	James K. Nisbet,	Iredell county, N. C.	University of Pennsylvania	Statesville	do
200	Edmund F. Ashe	Alabama	Jefferson Medical College	Wadesboro'	do
201	Jas. W. Hall	Salisbury, N. C.	Transylvania College	Salisbury	do
202	R. S. Campbell	Iredell county	Charleston do	Snow Creek	do
203	R. B. Riddick	Gates "	University of Pennsylvania	Hertford county	do
204	Wm. M. Riddick	" "	do do	Woodville	do
205	M. A. Locke	Rowan "	Louisville	Rowan Mills	do
206	D. B. Wood,	" "	University of New York	do do	do
207	O. P. Houston	" "	Jefferson Medical College	Mount Ulla	19, 1859
208	W. M. Campbell	Iredell "	do do	Statesville	do
209	James Hay	Ireland	Penn. Medical do	Johnston County	do
210	James McGuire	Davie county N. C.	University of New York	County Line	do
211	W. J. Jones	Greene county	do do	Snow Hill	May, 1860
212	J. W. Lewis	Hertford do	do Maryland	Harrellsville	do
213	W. J. Bullock	Wilson do	do Pennsylvania	Wilson	do
214	Wm. Jas. Courts	Surry do	New Orleans School Med.	Rawlinsburg	do
215	J. Eborn	Beaufort do	University of New York	Bath	do
216	W. R. Capehart	Edenton	New Orleans School Med.	Edenton	do
217	Frank. Patterson	Franklin	University of Maryland	Warrenton	do
218	Chas. J. O'Hagan	Ireland	do New York	Greenville	do
219	W. A. B. Norcom,	Edenton	do Pennsylvania	Edenton	do
220	J. Francis King	Beaufort	New York Medical College	Washington	do
221	J. W. Jones	Edgecombe County	University of Pennsylvania	Tarboro'	do
222	Will. H. Battle	Louisburg	Medical College of So. Ca.	Clayton	do
223	Richard H. Lewis	Edgecombe county	University of Pennsylvania	Rocky Mount	do
224	Horace I. Butt	Isle of Wight, Va.	do do	Durham's Creek	do

No.	NAMES.	WHERE BORN	MEDICAL SCHOOL	PRESENT RESIDENCE.	DATE OF SIGNING.
225	Dr. J. M. Henderson	Mecklenburg county	University of New York	Morganton	May, 1860
226	Wm. V. Bonner	Beaufort	do do	Pactolus	do
227	James F. Long	Plymouth	New York Medical College	Washington	do
228	H. B. Ross	Beaufort county	University of New York	Sladesville	do
229	J. N. Abell	do do	do do	Swan Quarter	do
230	John K. Ruffin	Alamance do	do Pennsylvania	Washington	do
231	John A. Gallagher	Washington	do New York	do	do
232	Chas. W. Knight	Tarboro'	do Pennsylvania	Williamston	do
233	J. B. Hughes	Newberne	do do	Newberne	do
234	W. C. Tate			Morganton	do
235	R. C. Pearson			do	May 8th, 1861
236	H. W. Tate			do	do
237	Calhoun Hill			Branch's Store, Duplin	do
238	Reynoldson Curtis			Catawba Station	do
239	Junius T Fuller			Allensville, Person	do
240	W W Gaither			Gaston county	do
241	R A Shinpock			Milledgeville	do
242	Jno W Lawing			Mecklenburg	do
243	P A Barrier			Mount Pleasant	do
244	J C Gidney			Shelby	do

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4. A J DeRosset, Sr*	do do	13. Richard Dillard,	Chowan county do
5. Simmons J Baker*	Raleigh do	14 Wm. H. McPheters,	St. Louis, Missouri
6. E T Broadnax	Leaksville do	15 E. D. Fenner	New Orleans, Louisiana
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8. John H Hill	Wilmington do	17 Thos. H. Hall*	Edgecombe county, N. C.
9. James J Philips	Edgecombe do	18 James Norcom*	Edenton, N. C

NOTE.—Nos. 10 to 15 inclusive, and 19, 23 and 24 have never signed the Constitution. Nos. 89 to 105 inclusive, state when born instead of where born.

Those marked thus * are deceased. Those marked (L) have left the State.

TO THE PATRONS OF THE BALT. JOURNAL OF MEDICINE.

Being Southern born, and loving my native soil with filial devotion, I have been impelled by a sense of duty to myself, my kindred and my country, to return to North Carolina in this her hour of peril, and to enter her service. As all communication with Maryland has been cut off by the traitorous hirelings who now pollute her soil, and whose vile presence my southern blood could not endure, I am constrained to abandon the Baltimore Journal of Medicine until a more auspicious period.

Though the pecuniary sacrifice thus necessitated by my return is great, it is most cheerfully borne, because made in the noblest cause that ever commanded the devotion of men, and the approval of heaven.

To those who have so generously sustained this enterprise by making advance payments, I beg leave to return my heartfelt thanks, promising to supply them with the Journal when its publication is resumed, or to refund the money due them, on demand.

EDWARD WARREN, M. D.,
Editor of Baltimore Journal of Medicine.

Edenton, N. C., June 10th, 1861.

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S. S. SATCHWELL, M. D. } Editors.

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NORTH CAROLINA

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Original Communications.

A Reply to Dr. W. T. Howard's Reviw of the "Essay on Malarial Pneumonia," which appeared in the Transactions of the Medical Society of North Carolina.

BY OTIS FREDERIC MANSON, M. D. MEMBER OF THE MED. SOC. OF N. C.

(*Continued.*)

THE EXPECTORATION IN MALARIAL PNEUMONIA.

In our essay, under the head of "General course and Progress," the following brief observations occur, in relation to the sputa in this disease:—"The cough is commonly dry at the commencement, *or* attended with an excretion of glairy mucus; sooner or later, however, the sputa become more or less tinged with blood, forming the pathognomonic ferruginous expectoration, the hues of which are as numerous, as the proportions in which blood and mucus may be mingled. Thus, we shall see in some cases, the latter merely tinged with blood; or as *more frequently happens*, a uniform, thin, bloody, frothy fluid, only is seen, possessing but little viscidity, or tenacity, whilst in *some* instances, a pure and copious *hæmoptysis* is observed. Later, however, the expectoration is liable to great variations in color and hue. Thus it may be of the various shades of

brown, red and yellow, commingled, and in the advanced stages may become green, or almost black."

Again, in our remarks on the "Physical Signs," we stated, that in Malarial Pneumonia, that the expectoration is usually more fluid, and more sanguineous, than in Simple Pneumonia, and that early in the invasion in the former disease, "in some cases, on the first day of its existence, there is a copious, sero-sanguineous *secretion* or *exhalation* present, obstructing the current of air in the bronchiæ, trachea and larynx," and in a *note* the opinion was expressed, that in this disease the expectoration is usually an *exhalation* and not the result of inflammation. Further on in our observations on the "Diagnosis," it was observed, that the expectoration is *often* very different in the two diseases. In the former (malarial pneumonia) it is usually less viscid, less copious and more fluid, partaking more of the character of blood mingled with serum; in fine, presenting more of the character of defibrinized blood, than as a product of inflammatory action."

These observations of course, do not escape the vigilance of our critic, whose conclusions may be summed up as follows:

1st. That there is no special character of the sputa, peculiar to, or diagnostic of pneumonia impressed by the poison of malaria.

2. That he has never seen hæmoptysis in pneumonia, unconnected with tubercular deposit except in one instance of long-standing disease of the heart.

3. That *we* have *no reason* for terming the thin, bloody, frothy expectoration an *exhalation*, as it is well-known at the present time, that no such open-mouthed vessels as *exhalents* exist.

From the earliest periods of ancient medicine, an expectoration of sanguinolent fluid, has been recognized, as characterizing the various forms of disease, classed under the generic name of Pneumonia. In the pages of Hippo-

crates,[1] Celsus,[2] Aretæus[3] and Galen,[4] it is frequently mentioned, and its varieties of color and consistence, are therein as truthfully and graphically described, as in the productions of the present day.

Nor have the more recent discoveries of modern science, diminished the diagnostic importance of this prominent, distinguishing symptom. With all the light derived from the investigations of Laennec Avenbrugger and yet in the nineteenth century, Chomel[5] declares, "the viscid and sanguinolent sputum, to be the most certain sign of inflammation of the lungs," and Andral, alluding to the same "prominent traits," exclaims, that "they do not permit us to confound *the expectoration of pneumonia*, with any other."

By both of these eminent writers, as well as by their cotemporaries and successors, it has been described as a viscid, tenacious, semi-transparent fluid, the different colors of which, as first indicated by Hildenbrand[7] and verified by experiments of Andral,[8] are due to the various proportions in which blood and mucus might be commingled. The properties of viscidity and tenacity, have been no less dwelt upon as essential peculiarities of the sputa, in the simple, or frank form of the disease. Grisolle[9] observes, the viscidity of the sputa is *very striking*, that they are usually inspissated, consistent, resemble jelly, and adhere so closely to the vessel, in which they are contained, that it may be inclined or inverted without displacing them." Chomel[10]

[1] The Genuine Work of Hippocrates. Sydenham Society, Ed. i, 246, 324. ii, 730, 732.

[2] De Medecina. Ed. Rotterodami, 1750, p. 269.

[3] Traité des signes, des causes, et de la cure des maladies, traduit par Regrand, p. 30.

[4] Oeuvres Anatomiques Physiologiques et Medicales traduit (par Daremberg) Paris, 1856, ii. 534-5-6.

[5] Dictionnaire de Médicine, xvii. 232.

[6] Clinique Médicale, 4me. ed. iii. 492-3.

[7] Medicine Pratique, traduit, par Gauthier, i. 93-4. Paris, 1824.

[8] Clinique Médicale, iii. 502.

[9] Traité Pratique de la Pneumonie, 216.

[10] Dict. de Médicine, xvii. 216.

describes the sputa, as usually transparent, mixed intimately with bubbles of air, and that they are also very viscid, adherent, glutinous, and form a trembling, gelatiniform mass, and Andral[1] describes them in nearly the same words. Such is the expectoration which has been ever, and still continues to be regarded as pathognomonic of Simple Pneumonia.

From a close observation of the various forms of pneumonia for many years, it has gradually forced itself on our conviction that the sputa in Malarial pneumonia were commonly, less viscid, and tenacious, than those usually described as pertaining to the Idiopathic disease. It is true, that the expectoration occasionally presents the same peculiarities, as those said to be characteristic of the simple form, for reasons which we shall endeavor to explain hereafter; but, in the large majority of cases of the malarial form, we are firmly convinced, from our own experience, that the expectoration as we have stated, is usually more fluid and more sanguineous in this than in simple pneumonia. It is true, as asserted by our critic, that this statement rests solely upon our simple assertion, to which, judging from his subsequent remarks, but little weight or value ought to be attached. But the question arises. Is the statement necessarily incorrect, because it emanates from such an humble source? Is a fact in science to be inevitably rejected because it does not proceed from high authority, because it has not been pronounced *ex cathedra?* No! no! The reign of oligarchs in physic is fortunately, and we trust, forever, ended, and the true votary of science, no longer recognizes within her domain, either priests or infallible guides, or "prayer books," from whose doctrines there is no appeal. In the words of the erudite and judicious Sarcone,* "Medicine is a Republic, of which each physician being a citizen, has the right to expose his opinions, and whose inter-

[1] Op. cit. iii. 492-3.

*Histoire Raisonnée des maladies observées à Naples, ii. 7.

est it is, to listen to the voice of its youngest child. It owes its acquisitions, to the feeble as well as the strong; to the timid as well as the audacious."

If, as our critic is graciously pleased to admit, we have been a "zealous student" and "faithful minister to the sick," then we hold that our opinion is justly entitled to some consideration, and that we have the same right to demand of him counter evidence, which he has to insist upon, "conclusive demonstration." If every statement in our paper, which was merely offered as a record of our personal observation, had been susceptible of "conclusive demonstration," there would have been no need of its having been written at all, as in that event, it would merely have been a repetition of that which had been written before by others.

If *there are* different forms of pneumonia, as we shall endeavor to prove hereafter, which, to use the language of Grisolle,† differ from ordinary pneumonia, in their march, prognosis and treatment, and in which certain symptoms altogether novel appear, and others, in which symptoms habitually apparent, are obscured, or altogether absent," if in this disease, as maintained by Drake, the disturbance of the lungs results *largely* from "sanguineous engorgement and retarded transmission, of blood through the organ," and the pathological condition is rather that of congestion than active inflammation and which view is supported by C. J. B. Williams,[1] Valleix,[2] Briquet,[3] and Constant,[4] in Europe, and in this country, by Chapman,[5] Cartwright,[6]

†Traité de la pneumonie, 398.

[1] Cyclopædia of Practical Medicine, iii. 633–4.

[2] Guide du Médicin Practicien, v. 568.

[3] Traitè Therapeutique du Quinquina, Paris, 1855, p. 388.

[4] Ranking's Abstract of the Medical Sciences, No. 18, 74. (Am. Reprint.)

[5] Benedict's Compendium of Chapman's Lectures, p. 218.

[6] Medical Recorder, x. 71, Philadelphia, 1826. N. O. Med. and Surg. Journal, vii. 699.

Lewis[7] and Bell,[8] then we should reasonably suppose, *a priori*, that the sputa—the result of these conditions, would present some diversity in their characters. Is it possible that the expectoration in a disease like Simple Pneumonia, which has always been regarded, as presenting an instance of the most intense inflammation, can present, precisely the same characters, as a disease, which, according to Drake and others, consists chiefly in passive congestion? Can it be true that the capillary vessels, in a state of intense phlogistic action and in a passive state of engorgement, pour out the same fluids, identical in appearance, consistence and composition? Does the Malarial poison play an inactive part in the scene? Does it exert no influence on the morbid process? Our critic *answers emphatically*, that "the expectoration is without value in the diagnosis pneumonia impressed by the poison of malaria, and that "there is *no* special character of the sputa peculiar to or diagnostic of that variety of the disease." In a word, his "malarial law" is here totally inoperative.

We should at least, have given our opponent the merit of candor and sincere conviction, had he adhered to this conclusion, however dogmatically and confidently expressed, but unfortunately for his reputation as a critic, after pronouncing his opinion so boldly and decidedly, he shifts his ground and contradicts himself. After positively asserting in part 1st. of his review, that the sputa in malarial pneumonia were "without value" in the diagnosis between it and other forms, he finds on consideration, that he has been rather premature in his decisions, and he therefore makes an occasion in part iii (being the 210th page of his Review) to return to the subject, and to indulge in a *résumé*, the evident object of which is to gloss over his previous errors. He now becomes suddenly enlightened, and finds that there seems to be good reasons for the *belief* that the sputum is

[7] New Orleans Med. and Surg. Journal, iv. 30.

[8] Theory and Practice of Medicine by John Bell and Wm. Stokes, ii. 220.

sometimes tinged by (biliverdin*) the coloring matter of the bile," and as in this latitude the liver is oftener deranged through the operation of miasmatic poison than any other cause—the sputa when of a bilious hue, "may lend *some help to diagnosis.*" He then proceeds to state, "the color of this sputum varies from a deep yellow, reddish-orange, or gamboge to a dark-brown or tobacco-juice appearance."

It is surprising that one, who like our critic, is so tenacious of "facts," and so perfectly regardless of "opinions," should at last agree to base his diagnosis upon a mere "belief," that the expectoration is tinged by the coloring matter of the bile, for I hold that although the impression that the *bilious hues* of the sputa in pneumonia is owing to the admixture of bile is of very ancient origin, and continues to be a popular belief to the present day, that it is yet scientifically undetermined. We were, therefore, careful in our essay to depict the various colors of the excretion without stating, or even implying, that any of its hues were due to this ingredient. We therefore, are warranted in stating, that until it is proven that any of the elements of the bile *are present* in the expectoration, that the yellow and green and apparently bilious tinge, can lend no aid to diagnosis, between the different forms of the disease. In proof of this position, let us examine the grounds upon which our critic bases his opinion. He says, "without entering fully into the matter, that there seems to be good reason for the *belief* that the sputum is sometimes tinged by the coloring matter of the bile. Andral was far from denying the influence of this cause in modifying the appearance of the spu-

*As our reviewer is so very fastidiously precise, he will excuse us for correcting him in regard to the coloring matter of the bile. According to Draper (Human Physiology, p. 204.) "The coloring matter in *carnivorous omnivorous* animals is *brown*, the *chlocpyrrhin* of Berzelius; but in *birds, fishes* and *amphibia it is green-biliverdin.*" As the latter is a green pigment, were it present in human bile, it could not impart the hues mentioned by our critic as characteristic of bilious sputa, viz: "a deep yellow, reddish-orange or gamboge, dark brown or tobacco-juice appearance."

tum; and in proof of its agency in this regard, he gives a *case;* and Grisolle, Martin, Solon, Potter, Drake and Swelt, make similar statements."

1st. Andral. It is true, as our reviewer states, "that Andral was far from *denying*" the presence of bile in the sputa and that he gave "a case," and from this partial notice of Andral's views on the subject, the reader is led to infer, that this author regarded the yellow and greenish tints of expectoration, as certainly due to admixture with the hepatic secretion—but what are the facts? In order that the reader may judge correctly for himself, as the observations of Andral are very brief on the subject, we translate them:

"Does the color of the sputa always depend on the presence of blood? Are they not also often colored by the bile? We are far from pretending to *deny* the latter cause of colouration, we have indeed given a case (case lv,) but we regard it as *more rare* than commonly supposed, and we believe that we *may generally attribute* the various colors of the sputa to the different proportions of blood they contain. If indeed we add to pure water, rendered viscid by the addition of mucilage, a small quantity of blood and gradually increase its proportions, the tint will be seen to become of a deeper and deeper yellow, then yellowish green, then a yellowish red—the color of rust of iron, and at last an intense red. We find also in the serum of the blood, when separated from the clot, the various hues of yellow, green and red, according to the various proportions of coloring matter they contain. The pneumonic sputa are very commonly yellow at the *debut* of the disease, they acquire afterwards a very evident red tint—then *in the degree* in which the *inflammation diminishes*, they are *again* seen to become *yellow or green. Shall we admit that the bile and blood succeed each other alternately*, when the varying changes of color are so *naturally explained*, by regarding it as the *result of the variable quantity of blood*, contained in the matter expectorated?"

Our reviewer, however, further states, in proof of the agency of the bile, in the coloration of the sputa, that Andral gives a case. Let us refer to it. (Case lv. "*Pneumoniavec Hepatite.*" op. cè vol. cit. p. 414.) Here we are told, at the first glance, that this is an instance of *Pneumonia* complicated with Hepatites as proven by the post mortem; and what does Andral say concerning the sputa?

We give his words: "*The sputa did not announce here the degree of* PULMONARY *inflammation.* They were scarcely viscid and the green color *seemed* to depend on the mixture of bile and bronchial mucus. What proves this is—that this same color was found on the superior surface of the tongue. *The nature of the expectoration was then determined in this case, by the disease of the liver* (these italics are Andral's.) The true bilious sputa are however extremely rare, (*infiniment rares*) and hereafter we shall *endeavor to prove* that the sputa to which this name is *ordinarily given,* are *nothing more* than sputa tinged more or less with blood." So much for this authority. He only cites *one* case, in which he *thought* the expectoration was tinged with bile, and this was a case, in which the liver was as much diseased as the lungs, *being "of such remarkable softness, that it was reduced by slight pressure to a reddish pulp."* It will be seen, therefore that the testimony of Andral is altogether decidedly *against* the opinion that the ordinary yellow and greenish hues of the sputa in Simple Pneumonia are owing to bile; for he not only argues against this view, but closes by declaring, that "the sputa which ordinarily receive that name are *nothing but sputa* tinged with various proportions of *blood.*" Andral never has written a line to encourage the belief that the sputa in *Simple* pneumonia, *Malarial* pneumonia or *Typhoid* pneumonia were tinged by the pigment of the bile.

2. GRISOLLE. This writer is the next in order, among those adduced by our reviewer to prove, that the sputum is sometimes tinged by the coloring matter of the bile; but after a careful perusal of all that this author has written upon the subject, we can find nothing in support of this view. It is true that he mentions that in some patients, "the yellow color, instead of being uniform throughout, is mingled with a tint slightly green, *as if* a certain quantity of bile were mixed with the mucus, and that the ancient physicians attributed the yellow and green colors of the sputa in pneumonia, to the presence of the bile, but he

also as positively and distinctly states, that Hildenbrand had "*demonstrated*" and Andral "had likewise *found*," that these hues were due to the presence of blood in different proportions. In conclusion, although he states that "these colors *may be* nearly produced by the coloring matter of the bile," and cites Andral's case above mentioned, (but as a remarkable one) he yet nowhere gives it even as his belief, that these hues were *certainly due* to the presence of this element. With Andral and Grisolle, even in this *one case*, it is a mere surmise, and neither pretend to base their opinion upon any analysis of the sputa. In his chapter on Bilious Pneumonia and Intermittent and Remittent Pneumonia, the latter of which our critic states is identical with our Malarial Pneumonia, Grisolle makes no mention of bile in connection with the expectoration, and therefore lends no possible support to the opinions of our reviewer.

3. Martin Solon. Our critic is mistaken in citing this writer as an authority for the opinion that bile may be present in the sputa, his experiments as given in his work "De l'Albuminurie, Paris, 1838," cited by Grisolle and Chomel were made upon the urine and serum of the blood and not the expectoration. It is hardly necessary to state, that the fact that he cites, of a greenish tinge being given to these fluids, by the addition of nitric acid, if they had any bearing on the subject under discussion, would be far from affording a satisfactory proof of the presence of bile—and have therefore been very properly ignored by Grisolle.*

4. Chomel. In his article on "Pneumonie," in the "Dictionnaire de Médecine," this writer, in noticing the symptoms of "Bilious Pneumonia," (as described by Stoll) observes. "The yellow or green color of the sputa, the tongue and often also of various matters excreted; the equally yellowish tint of the skin and the acrid heat, form the principal traits of this affection. Chemical experiments have proven, that the yellow, or green color of the sputa,

*Traité de la Pneumonie—Pneumonie bilieuse pp. 404–5.

may depend on the intimate mixture of mucus with a certain proportion of blood, as well as the presence of bile." In his "Pathologie Générale, a later work, this writer has no observation on the subject, and therefore contrary to the assertion of our critic, affords no proof of the agency of the bile, in coloring the expectoration.

5. *Drake.* In treating of the Symptoms of "Bilious or Malarial Pneumonitis," this author briefly observes, that "the presence of bile is manifest in the urine, the serum of the drawn blood, the skin and as *I believe* but *not on conclusive evidence* in the sputa from the bronchial tubes." As it is evident that this writer drew his reference in regard to the presence of bile in the expectoration from the color of the latter, and as he admits himself, that his opinion is a mere *belief* arising from evidence "*not conclusive*" further comment is unnecessary.

6. Potter. We have not been able to procure the essay of Potter which originally appeared in the Baltimore Medical and Surgical Journal for January, 1834. His paper is however quoted by Grisolle in his chapter on Pneumonie bilieuse and had it afforded any proof on this subject it would doubtless, have elicited his notice.

7. Swett. This writer merely states that in Simple Pneumonia" although there is *generally no evident biliary* derangement, but that sometimes in the course of the disease, the skin and eyes become yellow and the urine and even the expectoration become affected in the same manner." The color here being evidently the only evidence adduced in proof of the bilious character of the sputa, it will be seen that it affords but slender "proof of the presence of the bile" in the expectoration.

In reviewing these authorities, the reader will be doubtless surprised that the opinion which we perceive has been handed down from remote antiquity, that the yellow and greenish hues of the expectoration in pneumonia, were due to the admixture of bile, has never been substantiated. No analysis of the sputa to this end has been attempted by any

of the writers cited, nor by any other with whom we are acquainted. *We think it highly probable that the fact of its presence may be yet proven*, but as we have said at the onset, the question has never been scientifically determined, and until it has been, it can neither enter into the discussion of the Symptomatology of Simple pneumonia and much less throw any light on or "lend" any "help to the diagnosis" between that disease and the malarial form as asserted by our reviewer.

But our critic now becomes exquisitely hypercritical and microscopically anatomical. "With *what reason*," he peremptorily demands, "does Dr. Manson allege, that this variety of the expectoration ('the thin, bloody, frothy fluid,') is simply an exhalation and not the result of inflammation? Is it not well known at the present time that, strictly speaking, the fancied open-mouthed vessels (exhalents) described by Bichat have no existence? that none as Dr. Gross remarks have ever been demonstrated?"

Our critic here again vacates his tri-pedal throne, instals himself into the chair of anatomy, and gives us a gratuitous lecture. As grave, sententious and severe, as Sancho Panza in the gubernatorial chair of Barataria, he demands the reasons why we are guilty of following this anatomical flight of Bichat's luxuriant fancy, without pausing to inquire, if we were guilty at all. Most rigid of reviewers! of critics, the acutest! of microscopists, the minutist! we pray thee before passing sentence to listen to our defense. In employing the term "*Exhalation*," to denote the mode or process, by which the blood present in the expectoration, found its exit from the containing vessels, we by no means desired to inculcate the view, that a set of vessels existed, devoted to that special purpose. It is a familiar expression, frequently employed to indicate an occurrence, concerning the essential nature of which, anatomists themselves are not agreed. Concurring with our reviewer, that the sputa of pneumonia are composed chiefly of blood and mucus, that this blood has escaped from its natural channels, and

therefore, however minute in quantity, is really a hemorrhage; we cheerfully admit our personal ignorance in regard to the manner, or species of outlet, by which the blood escapes. There are various and conflicting opinions on the subject, amongst the most distinguished pathologists and it cannot therefore be demanded, that we should decide the question. As an admirable and concise statement of the subject we quote the following from Bonchut.* "The subject of Hemorrhages is often mentioned in the works of Hippocrates, but nothing in relation to their mechanism, or their production, is there indicated. Later, however, Themison, Aretæus, Erasistratus and Cælius Aurelianus, with less reserve in their language, commenced to dogmatise on this point, and we perceive in their writings, a very satisfactory division of hemmorrhages, from *wounds*, from *rupture* and from *ulceration*. This classification was not approved by Galen. He divided Hemorrhages into the three following classes: hemorrhage by diapedesis (exhalation) by diabrosis; (erasion) and by anastomosis, accordingly as the sanguine flow may have taken place, by the opening of the extremities of the vessels; by rupture or ulceration. This division, at present almost forgotten, reigned for a long period in the science. Van Helmont and Taracelsus were the first to oppose it, but their efforts were only temporarily successful. Their theory that hemorrhage was due to an alteration of the vessels, produced by blood charged with corrosive salts, erroneous in its origin, has at present only an historical interest. Frederic Hoffman in his first great work on hemorrhage, general and local, attributed them to an obstruction of the capillaries, accompanied with a spasm so forcible as to produce their *rupture*. This idea of spasm, a precursor of hemorrhages, introduced into the science by Hoffman, was revived by Stahl, and transformed in accordance with his principles, into a new theory, in which the greater or

* Nouveaux Eléments de Pathologie *générale*. Paris, 1857, pp. 533-4-5.

less activity of the vital principle is considered in its relations with crises, as the cause of the majority of hemorrhages. To him belongs the division of hemorrhages into *active* and *passive*, which exists in the present day. The first, are the result of spasm, which impels the blood towards the orifice of the vessel, and the second, on the contrary are due to external causes, attacking the vessels and rendering their parieties insufficient to retain the blood. This theory, which continued to be adopted until now, has had a merited success. With the exception of a few modifications, it has been adopted by Juncker, Borden, Cullen, Pinel, Bichot and by a great number of modern physicians.

In a different theory, which contrasts with this dynamic theory, the activity of the cause, is disregarded, and the material alteration which produces the discharge of blood, is alone considered. In fact it is to a constant lesion of the solids. that Morgagni, Marandel, and Broussais and his school, have attributed the production of hemorrhages.

Without having studied the subject in a special manner, there is however a physician—Huxham—whose researches on the dissolution and putridity of the blood, have elucidated the mode of production of certain hemorrhages. The fact has been confirmed by Andral and Gavarret, in their "Hematologee pathologique," and we are now clearly convinced, that certain conditions of the blood (nosohemics) facilitate greatly the discharge of blood from the vessels which contain it." We are thus given by Bonchut the theories existing on the subject down to the introduction of the microscope as a means of explaining physiological and pathological processes, when strangely enough, the doctrines concerning hemorrhage by rupture of the vessels, introduced as one of the divisions by Galen, again became in vogue. The objection of the microscopists to the theory of exhalation (diopedesis, transudation exosmosis) was based on the fact they asserted, that the capillary vessels do not possess pores of sufficient diameter, to give exit to the red globules of the blood, and therefore that

they could only escape by a rupture of their parieties. To this it may be replied, that as the rupture of these minute vessels has never been discovered, that this theory is open to the same objection as that of exhalation—the ruptures being as totally invisible as the pores.

It is difficult to conceive that any tissue of the organism and especially those of the delicate parieties of the capillaries of the lung can be wholly destitute of that property so common to bodies, as *porosity;* and analogy would lead us to the conclusion, that under certain circumstances, their insterstices would permit the exit of the colored corpuscles of the blood. In certain diseases, the blood has been seen to exude from the surface of the skin and mucous membranes, and in menstruation, which is regarded as the physiological type of hemorrhage, it does not lie within the range of the probable, that the exercise of a healthy function, would necessarily demand a periodical rupture of the uterine vessels. That the microscope, does not enable us to discern any openings in the sides of the vessels, sufficient for the passage of blood corpuscles, is at best a negative objection to the theory of exhalation. If we remember, that previous to the occurrence of hemorrhage, the vessels have been greatly engorged, we have two conditions to facilitate the exit of blood: 1st. The consequent dilatation of the pores in the sides of the vessels. 2nd. A diminution of the size of the corpuscles from pressure. We may, therefore, conceive that a vessel which in its normal state, offered no outlet of sufficient diameter, yet in the state of intense hyperœmia, might present orifices of sufficient dimensions. So much for the theories on the subject. They are but theories at best, it will be perceived, concerning transactions occurring beyond the reach of human vision, even when assisted by the contrivances of art, and practically it is of but little consequence, whether the one or the other is held. But this is not the opinion of our critic. In his judgment, it argues a most reprehensible, and flagitious ignorance, in any one, who adopts the doctrine of exhala-

tion. "With what reason, he authoritatively exclaims, does Dr. Manson allege, that this variety of the expectoration is simply an exhalation and not the result of inflammation. Is it not *well-known* (therefore the greater our ignorance) at the present time, (therefore the farther we are behind the age) that the fancied open-mouthed vessels described by Bichat, have no existence, that none as Dr. Gross (an authority above all others) remarks have ever been demonstrated," etc.

When that notorious "Scotch Reviewer," who alike destitute of discernment and sympathy for the first trembling essays of Genius, sought to cripple the wing destined to soar into the empyrean, by launching against his object the envenomed shafts of depreciative criticism. When he, we repeat, after exhausting his malicious irony and caustic sarcasm came to the young poet's "Imitations of Ossian," he paused and derisively exclaimed: "As to his Ossianic poesy, we are not very good judges, being, in truth so moderately skilled in that species of composition, that we should, in all probability, be criticising *some bit of the genuine Macpherson itself*, were we to express our opinion of Lord Byron's rhapsodies." Fortunate would it have been for *our* reviewer, had he taken a lesson of caution and prudence from his satirical prototype, for in declaring against the theory of exhalation and in intimating that in adopting it, we have been stupidly ignorant of well-known anatomical and pathological facts, he has been passing under the terrible lash of his criticism, *a "bit of the genuine Macpherson itself,"* and not content with annihilating Bichat, he has been immolating the learned, lucid, and eloquent Watson, "the illustrious Laennec," the erudite and original Andral, the distinguished Louis, *his* incomparible Grisolle and last but *not* least, *mirabile dictu! their* and *our* critic, our Reviewer himself.

1. Watson. As the remarks of this writer embody in a few words nearly all that is pertinent to the subject, we trust we shall be pardoned for quoting them in this place.

In Lecture xv, under the caption of "*Hemorrhage*—most commonly by *Exhalation*," this eminent author observes:

"Whence, then, and how, does the blood escape from its natural channels? Why, it exudes from the unbroken surfaces of organs, without any appreciable lesion of arteries, veins, or capillaries; just in the same manner as sweat oozes from the skin, mucus from the inner surface of the bowels, and serum or synoviæ from the membranes that respectively furnish those fluids; and probably by the very same outlets.

This certainly is a very remarkable circumstance, if it be true; and you will naturally ask what proof we have of its truth.

The proof is simple and I think conclusive. We examine the surface from which the blood must have proceeded; we wash and even macerate it; we employ the microscope to assist our powers of vision: yet we fail, after this careful inspection, to discover the slightest breech of substance or any appearance of erosion.

* * * * * * * * * * * *

When blood thus exudes, we say the hemorrhage takes place by *exhalation*. It is a convenient word, and will spare circumlocution. What the vessels or outlets to which we give the name of exhalents are; whether they be branches from the capillaries not large enough in the natural state to admit the red particles, or whether they be mere pores in the sides of the capillaries; these are points concerning which we have no positive knowledge. We know, indeed, that such channels must exist, though we cannot demonstrate or see them; and we know that while every part of the body is in a state of health and integrity, they do not allow the blood, as such, to pass through them.

I am aware that my learned colleague, Dr. Todd objects to this doctrine of *hemorrhage without rupture*, even of capillary vessels: arguing that if the red corpuscles of the blood which measure from $\frac{1}{4,000}$ to $\frac{1}{3,000}$th of an inch in diameter, could pass through lateral pores in those vessels, such pores must be large enough to become visible under the microscope. But on the other hand, Mr. Wharton Jones, who is also well versed in the use of that instrument, declares that the red corpuscles "can readily accommodate themselves to vessels of a diameter less than their own." However this may be, the distinction is broad enough between hemorrhage from a palpable leak in a large vein or artery, and hemorrhage from innumerable capillaries in which no rent can be demonstrated. Treating, then, this question of rupture according to the old maxim, that *de non apparentibus et de non existentibus eadem est ratio*, I shall venture to adhere to the term *exhalation*."*

*Lectures on the Principles and Practice of Physic, 2nd Amer. ed. pp. 163–4.

Laennec. "In the actual state of the science," observes this writer, "it may be affirmed that the greater majority of cases of mild or slight hemoptysis consists in a simple diapedesis or *exhalation* of blood from the surface of the bronchial mucous membrane."§

Louis. "As to the mechanism of hæmoptysis, as it is not rare to observe this symptom, in every degree, even at the commencement of the disease, when the existence of a cavern cannot be suspected, it must *necessarily* be considered as the result of *exhalation.*"*

Andral. "The mucous membranes often become the seat of *sanguine exhalations*, more or less abundant; of which we witness examples in hæmoptysis, hæmatemesis, menorrhagia, etc."†

Hæmoptysis is merely a *sanguineous exhalation*"‡

Grisolle. When after a hemorrhage from a mucous tissue, we can neither perceive any erosion, or solution of continuity, it must be admitted, that the blood has been *exhaled*, by a veritable secretion, by a mechanism analagous to that, which produces the secretion of mucus, serum or perspiration.

When we examine in a cadaver, an organ, which during life, has been the seat of an idiopathic *sanguineous exhalation*, (*exhalation sanguine essentielle*) there is found no appreciable modification of its structure. The ancients were then in error, in supposing that in such instances, there always existed, some manifest erosion of the arterial and venous vessels. (Grisolle had evidently never read Galen. M.) This opinion has however been victoriously refuted, by the microscopic researches of Morgagni and especially by those of Bichat."‡

§Traité de l'Auscultation médiate, 3me. ed. Tome i, 246.

*Recherches, Anatomique, Pathologiques et Therapeutiques sur La Phthisie, 2me ed. p. 207.

†Précis D'Anatomie pathologique, Tome, 1er. 37–8. Paris, 1829.

††Cowrs de Pathologie Interne recucilli par Latour, ii. 45. Paris, 1848.

‡Traité élémentaire et pratique de Pathologie Interne, Paris, 1857, Tome 1er. p. 624.

Howard. In relating the case of the daughter of his friend and partner, this author observed, that "the skin presented an icy coldness, and *exhaled*, a watery and exhausting perspiration." If as he declares that no such process as Exhalation can take place, "the fancied open-mouthed vessels," termed *Exhalents* "have no existence," then if he will permit us to adopt the Socratic method of answering a question by asking another, then we will reply to his reflecting interrogatories already cited, by inquiring, how is it possible that this "watery and exhausting perspiration" could have been "*exhaled?*"

We feel, that we owe an apology, for having thus dwelt upon this branch of the subject; but as we well know that our critic by the sheer force of assumption and extensive quotation has created the impression not only among the younger but also among some of the older members of the profession that he was specially learned upon the subject of this discussion, and that his views have thence derived an importance to which we do not believe they are entitled; we have deemed it our duty fully to expose the subject. Nearly all of the works which we have quoted so conclusively above have been frequently quoted by our critic in his "Review." Preferring to believe, that he has not purposely ignored the passages cited, in order to asperse our views and convict us of gross ignorance of elementary scientific truths, we will be charitable enough to hope, that he has never read the authors which he so frequently quotes—that as he has employed, as he informs us, a translator and collector to assist in our demolition, that he has probably sought the aid of a friend likewise to collect and arrange his arguments. Unhappily he has sought one whose apparent learning is mere patchwork, got up for the occasion, and whose views are a colliquative lientery of undigested materials.

The "Reason" demanded by our reviewer, which has led us to the conclusion that in this disease, the sanguinolent expectoration is an exhalation or hemorrhage, is based chiefly upon the vital phenomena—is a clinical inference

which he affects to despise, but by which, as we shall see hereafter, he is prudent enough to be altogether guided in his treatment.

When, as we have often witnessed our patients struck down in the cold stage of this disease, senseless, almost pulseless and cold, and discharging from their lungs a fluid which to all appearance seemed to be composed almost wholly of blood or bloody serum, the question has naturally arisen in our mind, can this expectoration be really the result of inflammation—Can inflammation, which is itself a re-action, an intense excitement of the blood-vessels exist in this condition when the vital powers are almost overwhelmed, and in which the patient presents the "counterfeit presentment of death." Is it possible, that these can be cases of ordinary pneumonia, as contended by our critic. Can phenomena, implying re-action occur before re-action. To these inquiries, reason, common sense, guides often as faithful and trustworthy as cadaveric developments, have answered in the negative. If not the result of inflammation to what other condition can the escape of the blood from its containing vessels be due. Why, simply, and it seems to us conclusively, to excessive engorgement of the capillary vessels. We shall pursue this subject no farther in this place, but in treating of the pathology of this disease we think that we shall be enabled to offer such an array of argument and testimony, in support of this view of the subject, as must lead to the same conviction in the minds of the most skeptical.

Hæmoptysis in Pneumonia. In his notices of our observations upon the expectoration in this disease, our reviewer complacently indulges himself in the following remarks:

"In regard to there being "a *pure* and *copious hæmoptysis*" in pneumonia, we agree entirely with Walshe, that if the expectoration be actually more or less profusely bloody—if there be *hæmoptysis* in short—the pneumonia is connected with the deposition of tubercules. If it ever exists in pneumonia uncomplicated by tuberculous deposit, it must be excessively rare in this section of country; for in a practice of nearly fifteen years in this region, we have never seen *hæmoptysis* in pneumonia a-

mounting even to a wine-glassful, that was not associated with the physical signs of phthisis, or in which the future progress of the case did not soon afterwards present them, save in a single instance occurring in a woman about seventy, who had long-standing organic disease of the heart."

Whatever may have been the result of our critic's experience of fifteen years, and however *entirely* he may agree with Walshe, (who has not a line concerning Malarial Pneumonia in his whole work) in regard to the occurrence of hæmoptysis in pneumonia, we can truly reiterate, that in a practice of twenty years, it has fallen to *our* lot, to observe a pure and copious hæmoptysis, in which there were no rational or physical signs, of phthisis, or other pre-existing disease, and which the subsequent history of the cases gave no support to the opinion, that any tuberculous condition of the lung had ever existed. Indeed, it has so happened to us, never to have observed hæmoptysis in pneumonia when affecting our phthisical patients. We can recall cases to our remembrance, in which hæmoptysis occurred in pneumonia, in persons previously enjoying good health, and who are *now living* in perfect, and robust health, and we may remark that when occurring in such cases, that it seemed to be critical in its character, as it was speedily followed by favorable termination of the case. That the supervention of hæmoptysis in pneumonia, unconnected with phthesis or heart disease, is not an impossible occurrence, albeit that it has never occurred within the range of our critic's and Walshe's observation, we append the following from Chomel:

"*Critical Hemorrhage.* Hemorrhage more or less abundant, occurring in the course of pneumonia, has been sometimes followed by a speedy resolution, and has therefore been considered critical. The respiratory passages, the nasal fossæ, etc., have been the seat of these hemorrhages, according to the report of authors.

A young man, aged sixteen, was affected with pneumonia. The attendants ignorant of the nature of his disease, administered to him a glass of brandy and pepper. Doctor Mathy saw him when the inflammation was at its highest degree. Two hours elapsed before a venesec-

tion could be practised, during which a violent hæmoptysis occurred. The blood was so abundant, that it flooded the chamber from the bed of the patient to the door. Immediately after this hemorrhage, the patient was relieved from his disease. Doctor Mathy observed this young man for a long period afterwards, in perfect health.

According to the report of Dr. Duquesnel, Broussais cited in his Lectures an example of pneumouia terminating in resolution immediately after hæmoptysis.*

Contribution to Conservative Surgery.

BY JAS. H. DICKSON, M. D.

In the No. for May, 1861, of the London Lancet, Mr. Thos. Bryant, F. R. C. S., assistant Surgeon at Guy's Hospital, publishes a paper under the title of "Contributions to the Subject of Compound Fracture," being an analysis of 302 cases.

His introductory remarks are so sensible and pertinent, that I am led to transcribe a few paragraphs as preliminary to the case which I have concluded to draw up for the N. C. Med. Journal.

"Having recognized the fact that the science of medicine and surgery is one purely of observation, and that its principles and practice can only be regarded as sound, so long as they are based on facts, the result of carefully observed and recorded phenomena, the author goes on to state, that he believes it to be the duty of every practitioner, to communicate to his professional brethren, any *positive* material he may possess, and thus to add his quota

*Lecons de Clinique Médicale recueillies par Sestier iii. p. 240. Paris 1840.

in building up the noble art and science to which we have the honor to belong.

In conformity with this view, he brings forward an analysis of upwards of three hundred cases of compound fracture of the extremities.

The cases were all taken from the experience at Guy's Hospital within the last twenty years.

He then proceeds to the analysis of the whole number—302 cases.

17 or 5.4	per cent.	were of the	thigh.
193 or 63.9	"	"	leg.
36 or 11.5	"	"	arm.
57 or 18.8	"	"	fore arm.

Eleven out of 17 cases of compound fracture of the thigh proved fatal. Of these seventeen cases, nine underwent primary amputation, six died and three recovered. One underwent secondary amputation and proved fatal. Seven were treated on conservative principles, four died, three recovered. Ten were thus treated by amputation, and seven of these died or 70 per cent. Seven were left to natures efforts for recovery, and of these, four died or 57 per cent. The excessive mortality of these cases is the second point to which the author alludes. 64 per cent. of the whole number of cases proving fatal. In nearly sixty per cent. amputation was had recourse to, and seventy per cent. of these cases ultimately sank.

The author then passes on to review the opinions of some military surgeons on the subject, and points out how Dupuytren, Hennen, Larrey, Guthrie and others all agree, that in compound fracture of the thigh, from gun shot wounds "in rejecting amputation we loose more lives than we save limbs and also "that in the exceptional cases which result in consolidation, the condition of the limb is not encouraging.

He quotes MacLeod's Crimean experience, as indicating the same opinion, this surgeon advising amputation in all such cases when taking place in the middle or lower third

of the thigh, and hesitating only in a like recommendatio n in cases of fracture of the upper third, on account of the extreme mortality of such amputations. Malgaegne's and Banden's experience is then quoted to prove the poor success of conservative treatment in these injuries, the latter surgeon saving two out of twenty-five cases and those two retained useless and deformed limbs.

The author then goes on to say that the experience of civil surgeons was not unlike that of their military brethren, although it is much more limited and expresses the opinion that a satisfactory result can rarely be obtained by conservative treatment except in the most favorable cases, that is when the subjects are young and the fracture is uncomplicated; when the soft parts are not materially damaged, nor the bone comminuted."

Coinciding fully with the general views of the author of this valuable analysis of the surgical experience of Guy's Hospital, upon the treatment of compound fracture of the thigh, I would at the same time strenuously contend that there are no cases in surgery which require to be treated more upon their individual peculiarities, than this class of accidents, and the following case is reported as exhibiting in a very striking manner, the value of conservative treatment.

It is true, that in some respects, this case falls into that class, which may be regarded as most favorable to this plan of treatment, inasmuch as the subject is young and the fracture uncomplicated, while the soft parts were not materially damaged nor the bone comminuted; and yet in another particular it was decidedly unfavorable to the attempt to save the limb, for the fracture was in the upper third of the thigh, the danger of which class of cases is recognised as extreme, by all experienced surgeons, as well civil as military.

Case of Gun Shot fracture of the femor, at the upper third of the bone successfully treated without amputation.

L. E. aged about 35 years, had the left thigh bone frac-

tured on the 9th of March, by a ball or slug discharged from one of Colt's revolving pistols. The bone was broken about two inches below the trochanter.

As his youth and good constitution were circumstances in his favor, and as the danger of amputation at the upper third of the thigh is very great under any circumstances, it was determined to be the best course to endeavor to save the limb, although this determination involved no inconsiderable risk of life.

A temporary bandage and splint were applied, which, on the 11th was replaced by a starched bandage and Jarvis splint, constituting quite an immoveable apparatus. After the starched bandage had become dry, a portion of it opposite the wound was cut out for the convenience of access to the wound for the purpose of dressing it. As great importance was attached to perfect quietude in the management of the case, it was enjoined upon the patient to keep as still as possible, and to assist him in doing so, he was kept fully and constantly under the influence of opium.

The resolution and firmness of purpose of the patient contributed very much to the attainment of this end and so important was this point regarded in the treatment of the case, that no attempt was madé to procure an alvine discharge for thirteen or fourteen days.

The wound was dressed several times a day for the purpose of preventing the discharge from soaking into and softening the bandage as well as for the sake of cleanliness and comfort.

The discharge from the wound, at first of blood and then a sanguineous ichor, became after a few days purulent, but never profuse, and after gradually lessening in quantity, finally ceased, with the healing of the wound which took place at the expiration of the third week.

As the case seemed to be progressing very favorably, no attempt was made to renew the dressing, although from the subsidence of the swelling and the wasting of the limb, the starched bandage had become quite loose, until the end of

the fourth week, at which time, some indications of ulceration of the hip from pressure made it indispensable to renew the dressings. At this dressing the nates were protected by an application of Erupl. Saponis and Jarvis splint, was replaced by the anterior suspension apparatus of Prof. N. R. Smith, of Baltimore; and here I cannot refrain from speaking in terms of very high praise of this admirable invention of that distinguished surgeon. I regard it as unquestionably the greatest practical improvement in the treatment of fractures of the lower extremity which has been made in modern surgery, and if the distinguished Professor had made no other contribution to practical surgery, this alone would fairly entitle him to the high commendation of the profession and the lasting gratitude of society.

The relief afforded by the application of this apparatus to the previously constrained and almost immobile position of the patient on his back, was very great, and as a ligamentious union of some firmness had already taken place, he was enabled frequently to change slightly his position to his great comfort, relieving the fatigue of the muscles and taking off greatly from the tedium of his confinement.

By the aid of this admirable contrivance the case proceeded uninterruptedly to a cure and at the expiration of the eighth week from the reception of the wound the patient was enabled to leave his bed and get on crutches.

It would thus appear that as little time was consumed in the cure of this case of gun shot fracture occurring in the upper third of the thigh (regarded by all practical surgeons as the most dangerous class of cases,) as would havebeen required for the consolidation of a simple fracture.

The limb though shortened about an inch and-a-half, promises to be a very useful one.

I beg leave to present this case to the consideration of our nascent military surgeons as furnishing some encouragement to them to attempt the saving of limbs, which the

established cannons of the art would unhesitatingly condemn to the amputating knife.

It does not, of course, justify an indiscriminate attempt to avoid amputation in this class of accidents, but it may well afford a plea in abatement of a hasty resort to that sharp, painful and dangerous alternative.

Note—Dr. Smith's anterior splint would have been applied earlier in the treatment but that the case had been on hand for some weeks before the publication of his paper describing its construction and application in the Amer. Jour. of Med: Sciences.

Diseases of Burke County.

Read before the N. C. Medical Society, at its Annual Meeting in Morganton, May, 1861.

BY C. HAPPOLDT, M. D.

The county of Burke, embracing an area of about four hundred and fifty square miles, extends thirty miles in a southern direction from the parallel 36°, having an average width of about twenty miles. The Blue Ridge crosses its north western border, and a range called the South Mountains extends along its southern. The Brushy Mountains in Wilkes county on the east, and the distant range of the Black, on the west, with the numerous intervening spurs of the Blue Ridge and South Mountains, appear from Morganton, completely to environ the county.

The surface of the country is very undulating and broken, and in many places rocky; nearly the only level lands being the river and creek bottoms. These latter are almost invariably fertile; the uplands, where not too steep, are well adapted to the growth of wheat and other cereals.

The county is traversed from West to East by the Catawba river; and is also drained by the Linville and numerous smaller streams. Its average altitude is about eleven hundred feet above the level of the sea.

Its geological formation is of the Transition or Metamorphic series, with the exception of the mountains which are granite or primary.

A peculiar feature of the South Mountains and of some of the higher hills, is that the fruit crop never fails; owing, it is supposed, to these zones being above and below the region of *killing* frosts. These mountains present another peculiarity of having an exceedingly fertile soil, composed of humus and vegetable detritus, in some places to the depth of several feet, upon their very summits.

From Morganton there is a beautiful and extensive view of nearly the entire county, with all the mountains which have been mentioned. The scenery, as viewed from this point, has been characterized by a late writer as being the most magnificent on the eastern slope of the Blue Ridge.

The climate is delightful and salubrious, being neither humid nor dry; and the temperature in summer, except during a few days in June and July, rarely rises above 75° during the day.

With a population of about 8000, scattered throughout the area described, it can well be conjectured that epidemic diseases are rare, and endemic unknown. Zymotic affections have prevailed in the surrounding counties, and in those adjoining to the west of the mountains; but they have as yet, scarcely sojourned here. Diphtheria, a year ago, ravaged Iredell and Buncombe. It left Burke unscathed.

Malarial diseases do not now occur as they did many years ago, in a certain low-lying-level valley, about five miles from Morganton. It was ascertained that at the time of the appearance of Intermittent fever, a gentleman residing in this valley changed the course of a stream; and to affect this thoroughly, felled and threw into the former channel, the trees which grew upon its margins. This change, made where

the escape of water was sluggish, would, it is supposed, be sufficient to account for the generation of malaria, by the decomposition of the decaying woody-fibre, and the vegetable detritus collected in the stagnant pools of the occulated stream.

It is not known that affections attributable to a malarial origin, have ever occurred, at any time, in any other part of the county. For the last five years they have disappeared even from this valley.

There may be said to be no diseases peculiar to this county—those of an inflammatory and typhoid character are most common.

During the summer and autumn of 1855, Dysentery of a grave and chronic form prevailed very generally. In some of the most salubrious localities—on elevated points—and near the mountains many fatal cases occurred. The disease in the great majority of cases was not intractable. The opium, saline and alkaline treatment was generally instituted with success in acute cases; in chronic ones, the internal administration of the nitrate of silver seemed to effect cures.

During the years 1856 and 1857, Dysentery still occasionally occurred.

Typhoid fever made its appearance, to a limited extent, in the winter of '57 and '58. A majority of the cases were very mild, and some of the persons attacked were not confined to their beds. There were, however, a few malignant and fatal cases.

In the early part of the Summer of 1858, a severe case of Typhoid dysentery occurred in an elderly lady who had just returned from Iredell county, where Typhoid fever of a very severe grade, was and had been prevailing, and where the mortality had been very great.

Shortly after the fatal termination of this case, Typhoid fever broke out among other members of the family. Two of these patients were young and robust ladies, who presented the characteristic features of the disease, as regards

symptoms and duration, so as to render an incorrect diagnosis impossible. Yet there were peculiarities which it may be worthy to note: The pulse instead of being frequent, was unusually slow, averaging in both cases, throughout the continuance of the disease, about forty beats to the minute; while the skin was generally cold, and frequently covered with clammy perspiration. Besides using those measures which were calculated to regulate the secretion, tonics and stimulants were exhibited from the beginning to the termination of the attack, and, as the sequel proved, with good effect.

The fever spread among the negroes of the plantation, attacking about one half of them, and proving fatal in one tenth of the cases. From this point it extended throughout the county, chiefly appearing among the negro population; and not attacking the whites until the subsequent year, when it occasionally occurred in detached localities, being attended in some cases with hemorrhage from the bowels, when it almost invariably proved fatal.

Mercurials and salines were generally exhibited at the inception of the attack, and the bowels occasionally moved subsequently by castor oil or other aperients. Refrigerent diaphoretics, and opiates constituted the chief medication in the milder cases. Veratrum viride and quinine were sometimes used, but with no benefit. When the tongue was smooth and dry, and tympanitis present, turpentine was administered in small doses, frequently repeated, and when it did not produce strangury, it appeared never to fail to produce a decidedly good effect. Chlorate of potassa was prescribed in many cases with signal success. It is a remedy deserving of more confidence in all diseases where there is a deficient oxidation of the blood, than perhaps any other single article of the Materia Medica.

Scarlet fever occasionally occurred during the year 1859. In some localities the cases were mild and uncomplicated, and all terminated in recovery. In others, the disease as-

sumed a malignant character; many being ushered in with convulsions, and speedily terminating fatally.

Some of the physicians used inunctions with lard—repeating the application whenever the skin became dry—during the continuance of the disease; and there is reason to believe that no other mode of medication could be more successful, or so effectually prevent the exfoliation or desiccation of the cuticle, or ward off the other dangerous sequellæ.

In the spring of 1860, and during the ensuing autumn and winter, an epidemic which may be pronounced catahrral, made its appearance among the negro population chiefly, and was in many cases fatal: No form of treatment appeared to have any effect in arresting a fatal termination in the gravest cases. It was frequently complicated with Pneumonia or Bronchitis; but when there seemed to be no lesion or internal congestion or inflammation, the worst results ensued. Among the younger rail road hands, three cases were ushered in with convulsions. The cerebrum was the chief seat of disorder, delirium supervened, and death terminated the attack.

During the winter of 1860 and '61, Rheumatism was more than usually prevalent. Several persons above thirty years of age, were for the first time attacked with the acute and inflammatory form. The sub-acute and chronic varieties were more than usually prevalent throughout the country. No fatal cases occurred.

Since spring Dysentery has again prevailed, apparently of an epidemic character; and added a few fatal cases to the mortuary record of the county. No special form of treatment or particular article of the Materia Medica appeared to act specifically. Mercury, ipecac and opium, salts and paregoric, dover's powder and cream of tartar, creosote and morphine, and even sulphur and the other so-called specifics failed to arrest the symptoms they were given to relieve. Careful nursing, attenton to diet, simple means to control the symptoms, to restore and correct the secretions, and to

aid nature in her efforts to re-establish health seemed the most rational method of procedure.

It may not be out of place to mention here a case of arrest of development in a negro child, which occurred two years ago. The infant had reached its full term, and appeared strong, and well-formed in every particular with the exception of the entire absence of the abdominal muscles. A thin and transparent membrane, apparently the peritoneum, covered the viscera, through which the intestines were distinctly visible. The little being seemed well and nursed heartily for three days, when peritonitis set in, and abruptly terminated its brief existence.

The county presents one case of, what the sufferer himself denominates, Vernal Asthma. The affection, as its appellation imports, makes its attack in the spring as soon as the pollen from the earliest vegetation diffuses itself through the atmosphere; and it continues to go through its phases until the forest blossoms have all matured. It affects not only the mucous membrane of the bronchiæ, but also that of the nares and eyes, and in the order here mentioned.

A withdrawal from rural districts during the period of inflorescence has been found to secure, for that season, an immunity from an attack. The subject being a member of the profession, it is to be hoped that he will report his own case, as he has promised to do.

Letters from S. S. Satchwell, M. D.

PARIS, April 3rd, 1861.

CHARLES E. JOHNSON, M. D.—

Dear Doctor:—The treatment of fractures in the Parisian Hospitals, does not in the main, differ materially from our American methods. Success here, as every where, does not alone depend upon a proper adjustment directly after the accident, but upon careful attention subsequently. The appliances used are hardly the same in any two Hospitals, though leading principles are observed in all. Variety in taste and preferences, so characteristic of French surgery, is manifested in the numerous kinds of splints and bandages, although the mechanical means of the French for treating fractures, are, as a general rule, more simple and cheaper than those used by a large majority of American surgeons. Maisoneuve, Chassaignac, Velpau, Nelaton, and other distinguished practitioners here, hold to the standard doctrine of extension, but it is ignored by a few, the most noted of whom is Jobert, of the Hotel Dieu. He disregards the principle altogether, and simply places the limb in a straight wire box, confining the member to the bed by bandages. He thus treats fractures whether the point of injury be above or below the patella, above or below the elbow, and whether simple or compound. I see almost daily in his service fractures treated in this way. He says that extension retards union and recovery—does not prevent shortening, and adds to the annoyance of the patient. He contends that by thus ignoring extension he cures his patient easier and quicker, and has fewer cases of shortening in proportion than those surgeons who condemn his practice. Syme of Edinburg treats fractures in the same way in the main. Whatever may be said of such anomalous proceedings, few practitioners agree with them, and such treatment in Amer-

ica would, if unsuccessful, render the practitioner very liable to a suit for malpractice.

In fractures of the leg and forearm, Velpau uses dextrine bandages. For the same sort of cases most of the Hospital surgeons here use plaster of paris bandages, and some of them splints made out of the same material, applied while in a soft state to the injured limb. This plaster of paris material is preferable from the fact that it hardens with more facility, is unaffected by moisture, and does not, like dextrine, mould, and seems well adapted to the purposes intended. It is prepared by simply mixing plaster and water to the consistence of cream, then a bandage of proper length is dipped in it to saturation and applied by roller to the splint. Made also by saturating cloth in the same way. This splint, applied on both sides of the limb generally, in a state of softness, soon hardens and thus fits closely. In the case of the forearm it is made to come well down to the fingers and thus the better to keep the parts in the coaptation. It is objected to this method, that after reaction inflammation and swelling may interfere with the proper progress of the case, and then that these solidified appliances are in the way. If the surgeon fears this, he leaves off the roller and merely uses the splints, which can be taken off and put on at pleasure and without the least difficulty.

This simple mode of managing fractures is very popular here, can be called into requisition easily in town or country, and is worthy of imitation. In fractures demanding extension, of course other means are to be used. Nelaton uses splints that enable him to examine daily and with ease the parts injured. He is very partial in fractures of the thigh to the use of Desault's splint modified by Sandbourn of Massachusetts. He generally prefers it whether the fracture is simple or compound. Its construction, as you know, is simple, consisting of a straight splint extending from the axilla to the foot and below, having an axillary pad and straps to go around the body, and to the

perinæum as a point of counter extension. Then, after the manner of Dr. Josiah Crosby of New-Hampshire, are applied to each side of the thigh cuts of adhesive plaster extending from the point of injury to below the foot and attached to the straight splint, and thus is extension secured. A screw may be attached by which to regulate extension afterwards, and another splint is applied to the inner part of the thigh, as an auxiliary aid to proper adjustment. A bandage around the whole may or may not be applied, as circumstances indicate. This apparatus, so simple and effectual, and so easily got up, when called for by emergencies, commends itself to the profession. The profession here are not so fond of complicated contrivances in managing fractures, as our practitioners are. Fracture boxes, artistically arranged inclined planes, and other costly and showy paraphernalia for attaching to the limbs, are not to be seen in these Hospitals, so far as my observation extends.

The treatment of affections of bones by removing the diseased portion, leaving the periosteum as a nucleus of separation finds much favor here. And in this connexion I may remark that I have found French Surgery more conservative than represented. I have not seen that the French Surgeons are so fond of unnecessarily using the knife, as many assert; on the contrary their custom as I have noticed, is to do all in their power to save limbs without amputation. Evidence of this is furnished by their devotion to this process of saving limbs. It is wonderful what nature is capable of doing in this and other diseases and is a cheering proof of the onward and conservative progress of our art. French practice daily affords new instances of the successful separation of diseased bones that have had the affected part removed by the surgeon, the periosteum alone remaining. The journals frequently contain reports of cases that have been cured in this way, that during many years of suffering presented, apparently no other means of relief than by amputation. Massanouve lately reported an interest-

ing case of the kind where the entire tibia was diseased, and fast decaying, and after its entire removal, except the periosteum, nature soon made another new tibia every way serviceable and complete. He reports another similar case, in which one half of the lower jaw was excised for disease, leaving the periosteum which was seized upon by nature, and in her marvelous powers a new bone was substituted in place of the old one.

Yours, &c.

S. S. SATCHWELL.

Paris, April 25th, 1861.

Dear Doctor: Military Surgery in our country has advanced with a slow step, not well assured, and in this respect is an exception to the ordinary course of medical science. It has had none of those brilliant marches which have signalized from time to time the advancement of most of the branches of medicine and surgery among us, but has grown by access of progress, if I may so speak, separated by long intervals of repose. As a nation we have rejoiced at this, but dissensions have brought upon us rare and difficult times, demanding us to look to our professional resources, and to feel a new stimulus for observation and research in this direction.

I only desire now to call atttention to a single stone in the structure, viz: primary and secondary amputations. If we content ourselves with reading early standard works on this question we shall be truly embarrassed to make up an opinion. Faune has contended with rare talent, that primary amputations are blameable, and that it is necessary to wait until the first inflammatory symptoms are calmed. The observations upon which this French writer bases his opinion and the reasons he adduces have seduced a good number of surgeons who at the present day accept his views. On the other hand Boucher has declared himself champion of the contrary opinion and defended primary amputations.

The academy of Surgery in Paris interested themselves in the matter and crowned the memoir of Faune for the following reasons:

1st. Amputations augment the stupor and in consequence aggravate the condition of the patient.

2nd. The enormous irritation which necessarily follows such an operation is added to that which the wound has already determined.

3rd. The traumatic fever which follows an amputation ought to be more severe in a subject full of life and gorged with blood than in one already enfeebled by suppuration.

This was in the latter half of the last century, but time and experience have shown the fallacy of such reasoning. In one of the naval combats of the first French empire with England a great number of the wounded suffered immediate amputation. Sixty of them were placed in the Military Hospital of Brest under the care of the celebrated Duret. Two only died with tetanus; all the others were cured. The Surgeon of the French vessel, Temeraine, which was taken by the English, wished to delay the amputations of the wounded until his arrival in port, and he had the mortification to see forty of the one hundred and ten patients under his care die during the passage.

M. Jobert the *habile* surgeon of the Hotel Dieu, and who has had great experience in Military Surgery, indicates the following conditions in which amputation ought to be immediately practiced.

1st. In case of a member irregularly swept away by a shot.

2nd. In case of fracture complicated by the opening of one of the large articulations.

3rd. In case of the bones of an extremity reduced to numerous fragments and a pulpefying of the soft parts.

4th. If a large articulation is fractured and its ligaments torn.

5th. If with much disorganization of the parts a large arterial trunk is separated.

This is the recognized rule at the present day, and one adhered to generally by American Surgeons. Dr. John L. Stone, surgeon of the Bellevue Hospital, New York, has given in the November number, 1849, of the New York Journal of Medicine, a complete record of the results of primary and secondary amputations, and he sums up as follows:

Primary amputations of the upper extremities are to be preferred both in military and civil practice; in both, primary amputations being more successful than secondary.

Primary amputations of the lower extremities are twice as successful as secondary in military practice.

The Parisian Hospitals employ anæsthetics, not alone in amputations, but in all important operations. They use, not ether, nor chloric-ether, but always chloroform. They entertain none of those fears in its employment which constitute objections so often with our operators, but the Surgeons here use it freely and unattended by any of those injurious and even fatal consequences that are urged against it elsewhere. They do not believe that it tends to prevent or retard union by the first intention, as some contend, nor that it exerts influences more depressing upon the system than follows operations without its use.

Yours, &c.,

S. S. SATCHWELL.

SELECTIONS.

Practice of Medicine.

Camp-Dysentery.

I consider the various forms of Dysentery, or Diarrhea, that prevail in camp, as being so intimately related to each other, it would serve no good purpose to treat of them separately. Sir George Ballingall treats of them under the title of Tropical Dysentery. The different features the various forms present, are probably due to climate or other accidents. Their prevalence and fatality in armies has always been marked; I have never known troops in campaign to escape it. It undoubtedly differs from ordinary dysentery in many respects. Thus Pringle remarks: "it is least known out of the field, and often general and fatal there." There were 23,000 cases in the Peninsular army, and nearly 5,000 deaths. It is most prevalent and fatal in hot climates. In India, the deaths from this disease are double those from fevers. In the Florida war, in 1836, it was most extensively prevalent and fatal; and the same is true of the Mexican war; and there the deaths from it, among the new troops, were double those of the old army. Its causes are principally violations of the laws of hygiene I have treated of in the preceding Chapter. I am confident, from my own observations, it may be very materially controlled by a due attention to these. Sir George Ballingall assigns, as the remote causes, heat combined with moisture; immoderate and indiscriminate use of fruits; abuse of spirituous liquors, exposure to currents of wind, and night dews.

Pringle refers, also, to heat and moisture as remote causes, and observes that seasons favorable to the generation of flies, caterpillars, and other insects, whose increase depends upon corruption, are most productive of dysentery. Rush coincides in this opinion, and says, the remark applies equally to bilious fevers, and has often been verified in Philadelphia. Pringle also remarks upon the similarity of the causes, remote and exciting, of malarial fever and dysentery, and says of the men exposed to the same causes, some get one, some the other and some both—such as after fatigue upon a hot day, sleeping upon the damp ground or in wet clothes.

This is one of the most prolific causes of camp dysentery, and one to which raw troops are particularly exposed. The regular soldier, upon his arrival at the ground selected for the camp, will relieve himself of his knapsack and arms, and then, while waiting for the train with the tents, etc., will collect wood for the camp fires. When the train comes up, he attends to the pitching of his tent, the preparation of his evening meal, washing his feet, drying his clothes, etc. When everything is done, he lies down and passes a comfortable night. The raw recruit, on the other hand will throw himself on the ground as soon as he halts—perhaps go to sleep, get thoroughly chilled, puts off his preparations for the night until the last moment, and, in consequence, has a badly-cooked meal and an uncomfortable tent, imperfect sleep, and rises for the next day's march but slightly refreshed. I point out this error that it may be hereafter avoided.

Pringle considers camp dysentery to be contagious, though he admits the infection to be less virulent than small-pox or measles. He says: "In camp, the contagion passes from one who is ill, to his companions in the same tent, and from thence, perhaps, to the next. The foul straw becomes infectious. But the great source of infection seems to be the privies, after they have received the dysenteric excrements of those who first fall ill.

Copland mentions the "fruit of hot climates, from his own observation and that of others," as a frequent cause. In my opinion, the fruit of all climates, indiscriminately used, will very generally excite it. There was a notion prevailing at Tampico, while I was there, that the banana was a remedy for it, though the inhabitants say that a drink of brandy, after eating bananas, is sure to make one sick. My observation does not confirm the inocuousness of the banana. I had, myself, a severe attack of dysentery from a moderate indulgence in this fruit. I have seen, also a number of cases excited by the use of the fresh limes so abundant at Acapulco, on the Pacific. Copland enumerates, among the causes, "badly-cooked meat or other food; pork; sour or bad wine; minute insects or their ova or animalcules in the water used for drink." "Several agents determine inflammatory irritation of, and an inordinate flux of fluids to the mucous surface of the large intestine, and their usual results" . . . . "exposure to cold, or cold and moisture, especially during or after great atmospheric warmth."

"Suppression of the secretions and excretions, poured into the large bowels, especially the biliary fluid, and accumulation of mucus in the follicles, are not altogether without effect in causing or prolonging the disease, especially of some of its protracted states; and several of the exciting agents, particularly cold, moisture, and malaria partly act in this way."—(Copland). Copland then gives the causes that disorder, or, as it were, corrupt these secretions and the circulating fluids—unripe fruit, blighted grain, flesh and viscera of diseased animals, water holding putrid animal and alkaline substances in solution. They exert a septic action upon the mucous surface, the circulation, and ultimately, the soft solids."

He also notices the convertibility of malignant fevers and dysenteries, by the concurrence of the exciting causes of the latter with the causes of the former. The causes that have most impressed me as exciting the disease are, in

addition to the influence of cold and moisture suppression of secretion, the cutaneous especially; errors in diet; neglect of ventilation of tents, quarters, and straw; drinking impure, or too much, water; bad police of camp; infection from the men's sinks. I must say a word or two upon the last.

In regular encampments, the place for the men's sinks is one hundred and fifty paces in front of the color line—those of the officers, one hundred paces in rear of the train. But when convenient, the regulations allow the sinks of the men to be placed in rear or on a flank. Both are to be concealed by bushes. Now, in my opinion, the choice of these places should be determined by the direction of the prevailing winds at the place of encampment, so that the offensive effluvia shall be carried away from the camp. There is no doubt, in my mind, that dysentery has been frequently increased in camp, by a neglect of this precaution. The usual method of constructing these sinks, is to dig a shallow trench, some eight or ten feet long, to drive a strong forked stake at each end, and to place a strong pole from one fork to the other, for the men to sit on. These sinks should be at least five feet in depth; immediately after reveille, not less than six inches of earth should be thrown upon the deposits of the preceding day and night, and when they are filled to within two and a half feet of the surface, they should be completely filled up and new sinks dug. If it can be procured, I would strongly recommend the following disinfectant, as cheap and effective, for use both in camp and hospital sinks; I have transcribed it from the last volume of the Annual of Scientific Discovery.

Sulphate of iron and alum are dissolved in water, till the solution is of the strength of 55°, it is then evaporated for eight or ten hours, during which eight or ten per cent. of lime is mixed with the compound—it is evaporated to a hard compact cake, finally run into forms, and exposed to the air till it is perfectly dry, then reduced to powder. It

may be kept in this form, or in solution; it has no odor. It instantaneously disinfects putrifying matter, privy vaults, etc.

There are many other circumstances, in addition to those I have already mentioned, that go to show a relationship between camp dysentery and malarial fevers. Johnson, in his work on tropical climates, says, in this disease the functions of the liver and skin are always implicated. "He will defy any one who has carefully watched the disease, at the bedside, to produce a single instance in which these functions were carried on in a natural manner, at any period of the disease."

Sir Simon Howard, of the East India service, in an alarming epidemic of this kind, caused the men to be kept in barracks out of the sun, from 8 A. M. to 4 P. M., with the effect of diminishing the disease in a fortnight, and converting aggravated dysentery into common diarrhea. This shows the affinity between the acute dysentery or colonites, and the hepatic flux of Ballingall. It is the hepatic flux, however, that within my observation, has been most prevalent in our camps, and most prolific of the chronic cases.

Symptomatology.—There will be no difficulty of diagnosis in these cases. The symptoms of ordinary dysentery are well known—the most prominent of which are more or less fever, frequent calls to stool, with griping and tenesmus, bloody and mucous dejections, small in quantity. But in camp dysentery, we have every degree of extreme disturbance, from the more violent forms of acute dysentery, to a trifling looseness or diarrhea. The alarm of the patient will be in proportion to the violence of the attack; still there is no grade not liable to run into fatal disorganiza tion of the bowel. The security frequently felt from the trifling nature of the attack, may betray the patient into fatal neglect. A prudent surgeon will watch closely the habits of the men, and interfere at once when he finds a soldier running too frequently to the sink. He will do well

to walk along the line at the stated roll calls, and observe the sanitary expression of the men.

Sir G. Ballingall says, "hepatic flux more frequently attacks those who, from habit or constitution, are less liable to violent inflammatory attacks, and more prone to irregular and disordered secretions of bile. These men are those of the nervous and melancholic temperaments; but I have found it as frequent in the sanguine, phlegmatic, and mixed temperaments, as any others. In fact, as far as my observation goes, we may take this form as the type, and refer all others to it; superadded causes determine the grade, either in excess or deficiency. It comes on very often as common diarrhea; the man complains that he has to go to the rear half a dozen times a day—he does not notice the character of the discharges—they vary in quantity, profuse or the reverse; next he will have griping and colicky pains about the umbilicus; then the discharges are unnatural, frothy, like yeast, too light in color; he is flatulent, loses his appetite, complains of "inward thirst," sometimes of nausea—his skin becomes dry, pulse quick. In the more chronic cases, the appetite is increased, and can not be restrained; the man emaciates rapidly, the tongue is furred, or of all colors, from white to the darkest bilious hue. Now, if the disease goes on unchecked, the appetite may improve, the tongue become cleaner, the fever less, but the flux continues, and emaciation goes on; the dejections assume, in their course, all sorts of appearances—serous, mucous, gelatinous, sometimes that of a uniform fluid feculent matter, more or less offensive, sometimes containing particles of food undigested. The older authors called those whitish particles, corpora penguia (Aretæus), sarkos (Hippocrates). Pringle examined them in some of his cases, and found them to be particles of cheese. Copland notices that the discharges vary from a white albuminous, or white of egg appearance, to a dark olive green or greenish black; sometimes marbled, or on one day like chalk and water, and another like a dark jelly or green fat of turtle. Blood is often either so intimately

mixed with the dejections, as to give them a uniform brick red color, or quite distinct and fluid, or partially coagulated. The discharges are sometimes as black and as thick as tar. The uniform brick, or darker red discharge, occurs frequently toward the close of life, and is apt to mislead the surgeon —it looks like an improvement in the character of the discharges, but it is generally a fatal symptom. Sometimes we have streaks of pus in the discharge.

We have increase of fever at night—the pulse becomes irregular, intermitting, frequent, weak; the tongue glazed, red, fissured, or like typhus; the skin harsh, dry—looks as if the man had not washed or changed his shirt for a month —the surface is scurfy or pulverulent; the emaciation extreme, the ears transparent; eyes glassy; the lips white; the teeth covered with sordes; the lips retracted so as to show the teeth—cadaveric smell; syncope if the man is raised up; then perhaps low delirium for a day or two, and the man dies. Sometimes there is a cessation of the discharges for 24 or 48 hours—the man thinks he is beginning to mend—then an inclination to stool is felt, the man gets up, staggers to the vessel, falls over and is dead.

The urinary secretion is variously affected during the progress of the disease. In the earlier stages it is not uncommon to have vessical irritation, with frequent micturition, and diminished excretion. This is more common in the "colonites" variety; but in the latter stages the quantity of urine is normal, 30 to 40 ounces daily, but of a low specific gravity 1.002; this gives but 4.66 of solids in 1000, which is less than one tenth of the normal proportion. This may account for the typhoid symptoms we then see.

Pain is not constant in the progress of the disease; still pressure over the sigmoid flexure of the colon, will generally discover some tenderness, particularly in the earlier stages. In the progress of the case, the abdomen becomes hard and inelastic.

The duration of the disease is from a few days to four months. I have known acute dysentery prove fatal in 24

hours; death may come at any time, it will be governed by the severity of the attack, the character and seat of the original lesion; the powers of resistance in the constitution, etc. But camp dysentery is essentially chronic in its tendencies, I have known it to last for years, and the patient eventually recover; this, however, is rare.

Autopsies in these cases usually reveal the omentum retracted to the arch of the colon, demented of fat, a mere shred; sometimes it is adherent to different portions of the intestine, but this is an accident due to local complication. The external coats of the intestine are scarcely altered—some slight change of color perhaps. Peritonitis from exhaustion may leave some traces here, but is not common. The small intestine is distended with flatus; the large, contracted, sometimes as if strictured. Parts of it give a sense of thickness, as if swollen, particularly about the sigmoid flexure, and occasionally the appendix vermiformes. The colon is frequently adherent to the other viscera. Sometimes, in the rapid cases, the disintegration of the inner coats extends through the peritoneal coat, so that the gut is torn asunder in running it over in the usual way. But when the intestine is laid open, extensive destruction is disclosed; ulcers of all sorts and sizes stud the large intestine, clustered more especially about the sigmoid flexure, but extending throughout it, and frequently passing into the ilium. Inflammation of the mucous coat of all the small intestines is not unusual. Sometimes the ulcers are raised, and their bases indurated. Again extensive sloughing of the mucous and submucous coats is seen, and the intestine gets torn by the slightest strain, even by its own weight. Invagination is occasionally met with, or perforation of the intestine, inducing fatal peritonitis.

The remaining viscera rarely escape; the most frequent complications are those of the liver, next of the spleen; the pancreas is occasionally involved. That the gall bladder should retain viscid black bile is to be expected, and

also that the mesenteric glands should partake of the irritation of the corresponding portions of the intestine.

Johnson thinks the liver complication an essential part of the disease. O'Brien investigated this point carefully in an extensive epidemic in Ireland, and found the liver involved in one half of the cases only, the spleen in one quarter, the small intestine in two thirds, the colon and rectum in all. Abscess of the liver is not so common as Johnson supposed. In India it may be due to other causes, such as engorgement of the gland from climate and diet. In Mexico, it is very common among intemperate pulque drinkers.

The symptoms and morbid appearances show the disease to be one of the chylopoetic viscera, *sometimes* involving them all, and *always* the intestinal canal, *i. e.* leaving there indications of the most destructive structural changes. That the disease is essentially inflammatory, seems to have been the prevalent notion of its nature. Pringle is inclined to that opinion, and Ballingall expresses it emphatically. I think it decidedly congestive. Copland is the first author I know of to admit this, but with caution, and many qualifications. He, however, says finally, in speaking of hepatic flux: "In most such cases, and in many of the simple as well as the most severe forms, congestion of the portal vessels and obstructions of this part of the circulation, are concerned in the production and perpetuation of the dysinteric symptoms."

This, in my opinion, is always the point of departure of camp dysentery. Suppressed or vitiated secretion is its first result, and these act and react on each other, and we have fullness of the vessels, or over-distention, resulting in the destruction of their elasticity, in both liver and intestine. This must be relieved somehow, either by nature or art, or it goes on to inflammation, and this the more intense the further the diseased part from the heart. This view is fully justified by a consideration of the most important recognized causes: suppression of the cutaneous tran-

spiration, throwing the fluids upon the center; malarial infection, whether from the animalculæ of Kircher and Linnæus or the cryptogamous spores of Mitchell; venous plethora, from too much water, or water containing putrid infusoria; abuse of fruits; use of provisions of bad quality, or badly cooked, etc. The error has been in considering the flux to be the grand feature in the disease, whereas this is only symptomatic of more important and remote disturbance.

In camp dysentery, the patient seems eventually to perish of the combined effects of inanition and exhausting flux, analagous, at least, to hemorrhage. So long as his fat suffices for respiration, he may survive, emaciation constantly progressing, but beyond this limit, he fails. I may here remark that whatever may be the temporary condition of the flux, and however hopeful the patient from its apparent dimunition or suppression, so long as *emaciation* is progressing, the man is *not* getting better.

In my view, we have then, in camp dysentery—

1st. Congestion of the portal system.

2nd. Inflammation, particularly of the mucous coat of the large intestine, but sometimes involving other organs and tissues.

3d. Vitiated condition of fluids concerned in assimilation of the food, with a consequent want of adaptedness of the latter to the wants of the economy.

4th. Probably paralysis of the lacteals and exhalents, so that the one does not take up the chyle, and the others pour out the thinner portions of the blood in abnormal and exhausting quantities, as well as sometimes the blood corpuscles themselves—indicating, moreover, serious implication of the ganglionic system in the assemblage of morbid phenomena.

Treatment.—The peculiar views of authors, and the prominent symptoms of the disease, have naturally suggested the treatment they recommend. Thus the "inflammation" and "flux" notions would indicate astringents and anti-

phlogistics. Pain would call for anodynes, etc. Pringle, indeed, thought bleeding "unnecessary, yet conducive to the cure." "Still," he says, unless the fever is kept up by inflammation not peculiar to the disease, *repeated* bleedings are unnecessary and hurtful, as in most distempers arising from a putrid cause." In weakly habits and few feverish symptoms, he wholly admits that evacuation.

He speaks well of emetics, and used in his early practice, wine of glass of antimony, which he had observed to be the best medicine in these cases, for relieving both stomach and bowels; but the roughness of its operation, and the prejudice against it among other officers, induced him to substitute ipecac. Still, among the common men, he added to this one or two grains of tartar emetic. He observed that, whenever he gave the weaker or the stronger vomit, they were *most successful* when they *operated* by *stool*. The ipecac treatment has been revived of late, by Mr. Docker, surgeon of the 7th Royal Fusileers in the Mauritius. He says that, after repeated failures with other remedies, and a mortality of ten to eighteen per cent, he never fails with ipecac in large doses. He had but one death in fifty, and that from abscess in the liver, the dysentery being completely cured! "In all constitutions, robust as well as delicate, the result is the same. In the very worst cases, when the strength of the patient is almost exhausted, after the whole range of remedies has been tried in vain, the disease running its course swiftly and surely to a fatal issue, 90 grains of ipecac have been given, and forthwith the character of the disease, or, I should rather say, of the *symptoms*, has been entirely changed; for the disease itself is literally cured—put a summary stop to—driven out. The evacuations, from being of the worst kind seen in dysentery, have not *gradually*, not by any *degrees* however rapid, changed for the better; they have ceased at *once*, *completely*."

Mr. Docker, uses an emetic, and sometimes a purgative first; then he applies a sinapism to the epigastrium, and gives ʒj tr. opii; and while the patient is under the influ-

ence of both, he gives the ipecac. in a draught of bolus. I find, however, from his cases, that this acted by procuring *good copious evacuations*, and that turpentine, camphor mixture, etc., were required for chronic mucous discharges in the after treatment.

Pringle always gave purgatives; if the stools were not copious enough with his ipecac., he gave calomel and rhubarb. After purging, he gave an opiate at night; but he says, it is better to omit opiates altogether, than to give them before purging, "for, though they seem to give relief, yet, by confining the wind and corrupted humors, they tend to fix the cause, and render the distemper more obstinate in the end." Herein he differs, reluctantly, from Sydenham, who, though he did not omit purging in *epidemic* dysentery, yet at all other times he trusted to laudanum alone. Now whatever," says Pringle, "was the nature of those fluxes which he treated in that way, I must believe that such as are most incident to an army are of a less tractable nature, and, in general, can not be cured without repeated evacuations."

Sir George Ballingall says that *bloodletting* is the remedy upon which we must rely in the worst form, and in the inflammatory stages of dysentery; but he confesses that this opinion is grounded more upon the post-mortem appearances than upon any repeated or extensive experience of its beneficial effects upon the living.

Bampfield, also, insists upon bloodletting, but says, a large proportion of the practitioners in both Indies, not only discountenance the practice, but have never employed it. So Twining says, the cure of acute cases in plethoric subjects, should be attempted by the early and free use of the lancet. But he naively adds, after each general bleeding, twelve or fourteen leeches should be applied to the abdomen, when pressure reveals pain. Others recommend bleeding to be pushed ad deliquium; and the further we go back, the stronger is the testimony as to its necessity.

Of course, all these authors refer to the semi-acute form

of dysentery, in so strongly urging the use of the lancet; none of them would have thought of employing it in an ordinary case of hepatic flux.

Johnson and Annesly give calomel to the extent of one scruple to gr. ij. or gr. iij. of opium in twenty-four hours. Ballingall disapproves of this practice in acute cases, but gives strong testimony to its efficiency in chronic hepatic flux, and pushes it to ptyalism; whenever the exhaustion of the patient does not forbid, he perseveres with it until the natural secretions are procured. Profuse salivation he condemns, as increased relaxation and debility are induced, and the patient is rendered incapable of taking the little sustenance he might be inclined to.

The limit I have imposed upon myself will not permit me to follow Copland, through the elaborate therapeusis he has developed for the many varied forms of the disease and the symptoms it may from time to time present; they are all referable to, and deducible from, the same principles of local inflammation; vitiated secretion, and perverted ganglionic and animal nervous function being the pathological condition. My own observation and experience, extending now over a period of thirty years, have convinced me that, with proper attention to military hygiene, though we may not succeed in completely preventing the occurrence of camp dysentery among troops in the field, still, we can so limit its prevalence as to make it no longer formidable. In treating of the causes of the disease, I have endeavored to point out the hygienic errors men commit, and thus afford the means of obviating or avoiding them. To carry out effectively the sanitary precautions I have indicated, the medical officer must endeavor to avail himself of the assistance of the officers of the regiment, and especially of the company officers. He should point out to them the necessity of watching over the habits of their men, on the march and in camp; of warning them against the consequences of infractions of the sanitary law, and of interposing their authority to prevent them from indulging

in any of the practices we have endeavored to show are so prolific in inducing the disease in question.

When a man is attacked with any of the forms of camp dysentery, my constant practice is to give at once a purgative dose of sulphate of magnesia ℥j. combined with ¼ to ½ a grain of tartar emetic. If this does not procure copious catharsis, I repeat the dose the next day or theday after. My object is to unload the portal vessels, as well as to remove any irritating matters that may be present in the intestinal canal.

This being done, absolute rest is enjoined, and abstinence from all fluids for the next 24 hours. A spoonful or two of water at a time, to moisten the mouth, are all that should be allowed. At night, if the patient is restless, a few grains of Dover's powder will generally procure him a comfortable sleep. I have treated hundreds of cases successfully with no other medication, and I firmly believe that, in the great majority of cases of hepatic flux, no other remedies will be required. They may require, some of them, two or three days' abstinence from fluids, with rest, and a repetition of the saline carthartic, but these cases will not become chronic. When the symptoms are more severe, the case more obstinate, with pain and tenderness of the abdomen, after the purgation, I use, according to severity of symptoms, dry or wet cups to the abdomen, particularly over the sigmoid flexure of the colon. This I repeat from day to day, to keep up a constant counter-irritation upon the surface, by the one, or to institute an effective local depletion with the other. In acute dysentery with bloody flux, the cups cannot be too thoroughly applied. I have not mentioned leeches, because they can not be procured in camp. When there is much symptomatic fever, with dry skin, I have sometimes been obliged to use small doses of ipecac. or Dover's powder, to determine to the surface, but always after the preliminary evacuations. Opiates and astringents, in the beginning of the treatment, are worse than useless. They cause the loss of valuable

time, lull one into a false security, aggravate the congestion already existing, and frequently convert a perfectly manageable disturbance of the economy into a formidable and intractable disease.

In the more purely dysenteric cases, when the rectum is the chief seat of local difficulty, anodyne injections have long been favorite remedies. I can not say that I have seen any decided benefit from them. They do seem to allay tenesmus for a while, and thus procure some little rest to the patient; but from their frequent repetition, they become themselves sources of irritation, aggravate the sufferings of the patients, and are, of necessity abandoned. I can not speak much more favorably of injections of nitrate of silver. The relief that follows them is only temporary—they do not cure; still, when the sufferings of the patient are so atrocious as they sometimes are in the acute form of dysentery, any means of even a temporary respite should certainly be put in requisition. The diet, in these cases, should of course be very simple, bland and unirritating, but nutritious. A few spoonfuls of thick rice water, or of strong animal broth, free from fat, and without seasoning, or of essence of beef, may be given several times in the course of the day; but the less water the patient drinks, the better.

One thing I neglected to mention in its proper place; and that is, the practice of soldiers after a hot day's march, or in a southern climate, where the nights are almost always cool, to strip up their shirts, leaving the legs and abdomen bare, when they lie down for the night; nothing is more refreshing to the senses, and nothing more prejudicial to the health. I believe it to be the exciting cause of a great many of these cases of camp dysentery.

In spite, however of any system of treatment, some cases of camp dysentery will become chronic, and are then of most difficult management. Once fixed upon an unfortunate patient, the chances are fearfully against his recovery. A few have constitutions sufficiently vigorous to react and recover, after even years of suffering.

Within the last five years, I have been more successful, however, in the treatment of these cases, and will now endeavor to give, in as few words as possible, the means I have employed.

In the purely dysenteric cases, after the subsidence of the fever, the bloody and mucous discharges still continuing, Hope's mixture has seemed to meet the indications well, as a constitutional remedy. As a local means, enemata of persulphate of iron, ten grains, in half an ounce of thin arrowroot, repeated three or more times a day, have been followed by the best results. Sometimes a few drops of laudanum may be added—half a drachm or less.

Absolute rest in bed is very essential. Dry cups to the abdomen I use constantly; wet cups occasionally, when there is any tenderness to be discovered over the sigmoid flexure of the colon.

Massola, of the Sardinian army in the Crimea, found the use of ergotine in chronic dysentery, a very successful remedy. He gave ½ a grain hourly till the discharges were arrested. I have used this remedy since, in several cases, and have been pleased with the results. Sometimes, however, it has failed. I would recommend that it should be tried. In the chronic forms of the hepatic flux, it will perhaps be more useful than in the bloody and mucous fluxes.

Some three years ago, my friend Dr. Foster, of Cincinnati, mentioned to me, that he had seen surprising results in a case of chronic diarrhea, from the use of very small doses of Fowler's solution. I lost no time in testing its powers. The first case in which I employed it was, one of an old friend, a general officer in the army, who was the subject of a debilitating and harrassing diarrhea, contracted in Florida many years since. He kept it somewhat in check by the constant use of astringent and anodyne draughts. I gave him five drops of the solution a day, in divided doses, with the result of procuring an undisturbed night's sleep, for the first time in several months, and his complete recovery in a few weeks. I have since employed

it in several cases, and always with more benefit than any other remedy I have ever used.

The perchloride of iron has been extravagantly lauded in all mucous fluxes, in a recent work by Deleau. He makes a solution of the salt, which he terms his normal solution, and which is of the strength of 30° Reaumur. Of this he makes a mixture with simple syrup, of 1 part to 60, and the dose is a teaspoonful. I have used the officinal solution in doses of ten drops, in a teaspoonful of syrup or water, and with good effect. It is worthy of a trial.

I have brought these remedies forward, because I believe them to be new in army practice, because I have seen good results from them, and because I have no confidence, whatever, in the whole catalogue of the other astringents, mineral and vegetable, that have been heretofore relied upon in the treatment of chronic diarrhea.

Rest, dry cupping, and a bland but nutritious diet, with as little water drinking as possible; flannel worn habitually next the skin, well ventilated quarters, and protection from currents of air, are important adjuvants in the treatment of all the forms of chronic camp dysentery.—*Hand Book for the Military Surgeon.*

Surgery.

Amputations.

There are several questions relating to amputations, which need to be considered briefly, and in their proper order.

First.—*What conditions of the limb in army practice demand amputation?*

Simple fracture of a limb, it is uncecessary to say, does not demand amputation.

A fracture complicated with considerable laceration of the skin, or of the skin and muscular tissue, does not of necessity demand amputation.

A fracture, with laceration of the main arterial trunk supplying the limb, does not necessarily demand amputation. If the artery can be tied, the limb may be saved, and the fracture treated successfully.

A fracture, accompanied with the laceration of one or more of the principal nervous trunks, does not always demand amputation, yet it is a graver accident than the one last supposed.

A fracture, complicated with a destruction of both the principal arterial and nervous trunks, occurring in the course of a large limb, like the thigh, the leg, the arm, or the forearm, renders amputation necessary.

Similar lesions, without a fracture, render amputation almost equally imperative.

Comminuted fractures, accompanied with extensive lesions of the soft parts, or with a rupture of either the principal artery or the principal nerves, in the case of large limbs, generally demand amputation in army practice.

Compound fractures, with either of the above complications, in large limbs, generally demand amputation.

Compound fractures of the *femur*, without other complications, in army practice, *generally* demand amputation.

Fractures accompanied with extensive and violent contusion, demand amputation oftener than the same fractures accompanied with open laceration.

In army practice, gunshot wounds which penetrate the shoulder-joint, the elbow-joint, or the wrist-joint, demand either amputation or resection. (Guthrie says that an arm, will endure almost any amount of injury, without demanding amputation.)

Gunshot wounds penetrating the hip-joint are generally fatal, yet amputation may be practised under some very favorable circumstances. Resection also presents a feeble ground for hope.

Gunshot wounds of the knee or ankle-joint demand either amputation or resection. The knee more certainly than the ankle; and amputation is more often required than resection. Guthrie has seen no recovery from a gunshot wound of the knee-joint, unless the limb was amputated. Nearly all army surgeons confirm this experience.

Gunshot wounds, in which the ball does not actually enter the joint, but in which the bone is struck above or below, and the line of fracture extends into the joint, are subject to nearly the same rules as that class of cases in which the ball enters the joint; but the rule is less imperative.

Gunshot wounds penetrating the carpal bones do not generally exact amputation; but the same wounds penetrating the tarsal bones, generally render amputation necessary.

Gunshot wounds through or between the phalanges of the fingers or toes, or through the bones themselves, are often cured without amputation. Similar wounds of the fingers or toes do not in general result so favorably; but the rule in this latter case cannot be stated very positively.

Second.—*The point at which the amputation is to be made.*

This must depend mostly upon the part of the limb which has suffered injury; but in general we may say, at as low a point as will be safe; or in other words, we would state the rule to be, to *save as much of the limb as possible.* Yet in no case should the life be put at hazard for the sake of a limb, much less for a small portion of a limb.

There are two reasons why we adopt the rule above stated. *First*, because the longer the stump, the more useful it will be to the possessor; and *Second*, because experience has shown that the nearer an amputation is made to the trunk and the larger the circumference of the limb, the greater is the danger to life. Thus, according to Malgaigne, only one death occurred from twenty-six amputations of one of the smaller toes; seven deaths from forty-six amputations of the great toe; nine from thirty-eight partial amputations of the foot; one hundred and six from one hundred and ninety-two amputations of the leg, and one hundred and twenty-six from two hundred and one amputations of the thigh. Again, in the Crimea the mortality after amputations of the thigh, in a certain number of cases, was as follows: Lower third, fifty-six per cent.; middle third, sixty per cent.; upper third, eighty-six per cent.; hip, one hundred per cent. (twenty-three cases*). The same law of relative mortality was observed by the British Surgeons in amputations of the upper extremities.

After amputation of the forearm, seven per cent. died; of the upper arm, nineteen; and the shoulder-joint, thirty-five per cent.

The mortality after amputation of the femur through the upper third, is stated to be eighty-six per cent., but it is quite probable that it was much higher. McLeod says that he never saw himself any case recover in which the ampu-

* Stephen Smith, Surgeon to the Bellevue Hospital, and Professor of the Principles of Surgery, in a paper on hip-joint amputations, has brought together ninety-eight cases, of which fifty-six proved fatal; a ration of mortality of only fifty-seven and a half per cent. (*N. Y. Jour. Med.*, Sept. 1852.) In the Mexican campaign all amputations of the hip-joint terminated fatally.

tation was beyond doubt in the upper third. The French and Russians also found these amputations so hopeless that they almost abandoned them.

In certain instances, however, we find it convenient or necessary to deviate from the rule which we have established to "save as much of the limb as possible."

There is no reason to suppose that disarticulation, or amputations made through joints, are any more dangerous than amputations made by section of the bone; and on the field, time is of so much consequence, that we can well afford to sacrifice a small portion of a phalanx, by disarticulation at the nearest sound joint, rather than make the delay necessary for the application of the saw. Nor is it scarcely worth while to attempt to save a few of the carpal bones, when the disarticulation can be effected at the wrist-joint so much more speedily and neatly; indeed, if they were saved, they would, under any circumstances, add little or nothing to the value of the limb.

Other things being equal, we might prefer to amputate just below the elbow-joint, rather than through the joint, in order to save an inch or two of the radius and ulna; but the dangers to the patient are not, we think, precisely equal. It is safer to amputate through the joint, than at a point in such close proximity below, since by the latter method we expose the patient to the danger of inflammation extending from the wound upwards into the unopened, but more or less disturbed articulation. The same remarks apply to amputations made an inch or two below the head of the humerus. It will be better, generally, to disarticulate at the shoulder-joint. This latter operation was made in the Crimea, from the 1st of April to the end of the war, one hundred and two times, and it was followed by death in only twenty-five cases.

We would, upon the field or in civil practice, amputate toes only at the articulations; occasionally we may make an exception in favor of the first phalanx of the great toe, which can with advantage sometimes be divided through its middle portion.

In amputating at the foot we may remove all the metatarsal bones, according to the method recommended by Heys; or we may separate the tarsal bones between the calcaneum and astragalus on the one hand, and the cuboides and scaphoides on the other, as practised by Chopart; a portion only of the calcaneum may be saved, as in the operation of Pirogoff, or the complete disarticulation may be effected at the ankle-joint, as improved and recommended by Syme.

If, however, it becomes a question of amputation within one inch above the joint, or six or eight inches, we would unhesitatingly declare in favor of the latter, since the stump is not so likely to ulcerate, or to leave a tender cicatrix, exfoliation of the bone is not so apt to occur, and the power of the leg as a lever is not materially diminished. Indeed, we ought to say that upon the field we would prefer this point to disarticulation according to the method of Syme, since the latter exacts on the part of the operator the utmost care, and requires for his skilful performance, a good deal of time; besides this, experience has shown that Syme's operation does better when it is made for chronic disease of the foot, than when made for traumatic lesions. Pirogoff's modification of Syme's operation is liable to the same criticism.

We would not amputate within an inch of the knee-joint, for the same reason that has been given for preferring not to amputate just below the elbow-joint. It has been found to be extra-hazardous.

Amputation through the knee-joint is not objectionable, provided a small portion of the lower end of the femur is at the same time sawed off, as has been recommended by Mr. Syme. This affords a more even stump, and does not increase the danger. Baudens says that his experience in the Crimea enables him to affirm that disarticulation of the knee ought always to be preferred to amputation of the thigh. When this operation is made, the patella should be preserved, and great care should be taken that the flaps are

ample, so as to cover in completely the expanded surface of bone. Of eighty-six cases brought together, in the Nov. No. 1852, of the *N. Y. Jour. Med.*., by Prof. Stephen Smith, forty-nine resulted in recovery, and thirty-seven died, giving forty-three per cent. as the ratio of mortality.

Amputations ought to be made through the trochanters of the femur rather than through the hip-joint. We have seen that all of the cases of this latter operation, twenty-three in number, made by the British and French surgeons in the Crimea, proved fatal. Yet it is not certain but that it would be better in all cases of gunshot wounds occurring in the upper third of the thigh, to adopt it as a rule not to amputate; so little encouragement do the statistics of these amputations, made by army surgeons, afford.

Amputations made through the cancellous structures, near the ends of long bones, are less dangerous than those made through the shafts. This is explained by the fact that amputations through the tubular portions of the bone expose to diffuse inflammation and suppuration of the medullary canal and consequent pyemia.

Third.—*The method of amputation.*

Upon this point surgeons remain greatly divided. Velpeau, Guthrie, Vavernier, Sir Astley Cooper, Ben Bell, Charles Bell, Gibson of Philadelphia, Paul F. Eve of Tennessee, and many other distinguished surgeons at home and abroad prefer the circular method. In France this mode is generally practised.

Liston, Lizars, Fergusson, and Syme, who may be said to represent the Edinburgh school, prefer the flap method. In this country it is very generally adopted, especially by the younger class of surgeons.

Without entering into a discussion of the relative advantages of these two methods in *general* practice, or attempting to reconcile the conflicting opinions of the two parties, we shall content ourselves by affirming our belief that both methods have their special applications; and that, in gene-

ral, the choice may be safely left to the judgment of any intelligent surgeon.

In relation to their application to *military* practice, however, it seems necessary to make one or two special explanations.

In nearly all amputations made upon the field, where haste is demanded, the flap amputations have greatly the advantage. They can be made in much less time, and where time is a consideration of the greatest moment, they are greatly to be preferred.

If, however, time is of less importance, as it will be whenever the number of surgeons is properly proportioned to the number of the wounded, and the patient is to be transported immediately or soon after the operation a long distance, the preference ought to be given to the circular amputation, at least in the case of all larger limbs.

The heavy flaps attached to the end of the limb, disturbed by incessant motion, loosen and become gangrenous or ulcerate. This was the experience of the Crimean surgeons, where soldiers were transported long distances by land after amputation; and even when carried upon transports to Scutari, the same fact was observed.

Fourth.—*The period of time in which the amputation ought to be made.*

The "shock" is that condition of the nervous system which immediately ensues upon certain injuries in certain persons, characterized by coldness of the surface, pallor, tremors, a wild, anxious expression of the face, small, irregular and feeble pulse, sighing respiration, partial or complete paralysis of the bladder and sometimes of other organs, mental disquiet or apprehension, incoherent speech, etc.; which condition may continue a longer or shorter period, but usually, unless severe, disappears in a few hours. When the accident is of a more grave character; no reaction occurs, and the patient dies immediately or within a short time. In general it may be said, that if reaction does not

occur within twenty-four or at most forty-eight hours, the patient will die.

In some cases the occurrence of the shock seems to be delayed, the depressing influence of the injury not being felt until some little time after. Such, at least, is the opinion of Mr. McLeod, who affirms that he knows of several well authenticated cases which prove the correctness of this position. For ourselves, we confess that we have never met with these examples, except where some visceral lesion or the rupture of a large blood-vessel has accompanied the accident. It is true that men often faint after a few minutes, or after removal, and when they have had time to contemplate their situation, who seemed undisturbed at first; and in other cases a severe and prolonged irritation from a spicula of bone has steadily aggravated the signs of depression and of shock; but we think those cannot with propriety be termed examples of delayed shock. We do not intend, however, to deny that the nervous agitations may be delayed in some cases, but only to express our conviction that the condition to which our attention has been called by these gentlemen is a rare phenomenon.

Surgeons who hold to the frequent occurrence of delayed shock, recognise in this an argument in favor of *immediate* amputation, in a great majority of cases; and certainly, assuming the premises to be correct, the argument seems not unsound. Says McLeod, "if this precious moment could be seized at all times, and that operation performed under chloroform, which assists so much in warding off the 'ebranlement' we fear, how much more successful would our results prove, than under other circumstances they can ever be."

The idea of immediate amputation did not, however, originate with those who maintain that the shock may be, and is, in fact, often delayed. Ambrose Paré urged that amputation should be made while the wounded were in sight of the battle-field; and Richard Wiseman, Sergeant Surgeon to Charles the Second, says, "if you decide to op-

erate, do so at once, while the soldier is in heat and in mettle."

Larrey, indeed, seemed to regard amputation as the proper remedy for this peculiar condition of the nervous system. "I have lost," said he, "a great number of soldiers, because, although operated upon within the first twenty-four hours, yet the operations had been made too late. * * * It is then demonstrated that the commotion, far from being a contra-indication to primitive amputation, ought to decide the surgeon in its favor. * * * The effects of the commotion, far from being aggravated, diminish and disappear insensibly after the operation."

Dubor, who served in America during the War of the Revolution, states, that "American surgeons amputated at once, and lost but few, but that the French delayed and lost many."

In regard to this question, it is our opinion, also, that amputations may be made in some cases immediately, or as soon as possible after the receipt of the injury; as, for example, when a limb is nearly torn off, and a dangerous hæmorrhage which cannot be arrested, is occurring; or when spiculæ of bone, such as neither the forceps nor fingers can extricate, are causing intense suffering. In all cases of injuries to small limbs, such as the fingers and toes, immediate amputation is proper; and in a considerable number of cases of injuries to larger limbs, when it is clearly seen that the patient is not faint, or depressed, or suffering under great nervous agitation. But we cannot accept of the doctrines of Paré, Wiseman, Larrey, McLeod, and others, without liberal qualifications, and a careful specification of the cases to which their rules are to be made applicable.

It may be that, as Hutcheson declares, the condition which we term shock, is not so frequently present as has been generally supposed, even after severe injuries; or that, as McLeod mantains, there is generally an interval, longer or shorter, between the receipt of the injury and the

accession of the nervous commotion. These points may be safely left open for future inquiry; but upon one thing we must insist, namely, that when the nervous agitation and depression are actually present in any considerable degree, amputation is generally a most dangerous resource. Amputation may then be necessary for the reasons which we have stated, and perhaps for other reasons which we have not noticed, but the necessity is greatly to be deprecated.

Our own experience has been, after at least twenty years of observation in hospital practice, including almost every variety of accidents and of amputations, that amputations of large limbs, made after severe injuries and before reaction has fairly been established, have resulted speedily in the death of the patients.

The cases in which the nervous commotion is "diminished" by an operation, with all deference to the opinion of the distinguished Larrey, we must explain to be those in which the broken bones, fragments of shell, splinters, clothing, or some other foreign substance lying in the track of the wound, are causing pain and perpetuating the irritation. Sometimes, perhaps, it may be the condition of the nerves themselves, or of the other tissues which have suffered laceration, and the clean removal of which by the knife may occasion relief; but such cases would be recognised by the presence of great pain, and extraordinary sensibility in the parts, which must lead us at once and naturally to regard amputation as the proper remedy.

In these opinions we think also we are sustained by the observation of a large majority of all practical surgeons, whether in or out of the army.

Our first duty, then, to many who have fallen upon the field and who cannot escape amputation; is to comfort and sustain them by words of encouragement, and by the administration of water, wine, brandy, or food; and having dressed the wounds temporarily, to wait patiently the

establishment of complete reaction before proceeding to the operation.

As to the value of some delay in certain cases, nothing could be more pertinent than the following communication, which the author has lately received in reply to certain inquiries from Usher Parsons, of Providence, R. I., surgeon in the United States Navy during the war of 1812. Portions of the letter do not relate especially to the subject of amputation; but it is all of sufficient interest to require of us no apology for its introduction, unabridged, at this place:

"Dear Sir:—In the battle of Lake Erie, on the 10th of September, 1813, nearly a hundred were wounded; sixty-one of them on board the Lawrence, twenty-three on board the Niagara, and about a dozen in the smaller vessels. There were eleven cases of compound fracture, besides simple fracture, many gunshot wounds and extensive lacerations, and among them all, several amputations were required. Those wounded on board the Lawrence were ranged on the upper deck, in the spaces usually occupied by cannon and gun-carriages, which were removed from both sides of the deck, to afford room for mattresses. The only shelter over the wounded thus lodged, was an awning that served to screen them from the sun, and tarpaulins and canvas to spread over and shelter them when it rained.

"To the wounded of the Lawrence were added, after two days, those of the Niagara and of the other small vessels. The whole number of patients requiring a recumbent posture on the deck was about fifty. They remained in the ship fourteen days after the action, and were then landed at Erie, and lodged in a large unfinished court-house, and remained there until cured. Of this ninety-six wounded, only three died, and these were cases of so severe a nature that a surgical operation was not deemed justifiable, and they were left to linger out a few days of miserable existence. This entire success I have ever felt warranted in

ascribing to the purity of the air, more than to any other cause.

"Another cause of success worthy of special notice was, the delay of amputations and all severe surgical operations until the system was entirely recovered from the shock of the injury.

"Having sole charge of the wounded of the whole fleet, the other two medical officers being ill, and the wounded being passed down to me faster than I could attend to them in a proper manner, I aimed only to save life during the action, by tying arteries or applying tourniquets to prevent fatal hæmorrhage, and sometimes applying splints as a temporary support to shattered limbs, and in two or three instances small portions of flesh were divided which held a dangling limb to the great annoyance of the patient. In this state the patients remained until the following morning, under the free use of cordials and anodynes. At sunrise I commenced amputations, and in the course of the whole day and evening was able to finish all operations and dressings, and I believe do justice to each. On the following day I visited the other vessels, and brought all their wounded on board the Lawrence, and treated them in like manner. Now, as all but the three hopeless cases recovered, it was proved beyond a doubt, that the delay of amputations and other severe operations for one, and some even two days, had no unfavorable effect upon the chances of recovery, and probably some lives were saved by it, which would have been lost, had the operations taken place on the day of the injury. I am, however, advancing no new doctrine in this matter, but only adding new facts strikingly illustrative and confirmative of the correctness of those generally received at this day.

"A third cause of success in this action was, the plentiful supply of fresh provisions and vegetables, brought to the fleet from the shores of the Ohio, and of a generous supply of wine and cordials.

"Fourthly. There can be no doubt that cheerful and

buoyant spirits, occasioned by victory, contributed not a little to recovery.

"In two other actions I saw much to confirm the foregoing opinions. In an attack on Mackinac the following year by Col. Croghran's small army, transported thither in our vessels, the number wounded was less than that on Lake Erie. Our vessels were crowded and afforded no suitable lodgings for the patients—the air became foul—diet was salt meat and dry biscuit, with no fresh vegetables, and added to this, was the failure of our enterprise, we being repulsed. Consequently the wounds acted unkindly, and some died, that under favorable circumstances might have been saved.

"In a third action opposite Black Rock, near Buffalo, nearly a hundred of our sailors crossed the Niagara in a cold November night to take a battery by storm, preparatory to the crossing of General Smyth's army to take Upper Canada. The sailors succeeded with a loss of seven killed and about thirty wounded. The distance is about one mile across the river, and the wounded were much chilled in recrossing in open boats. The apartments for receiving them were very small and ill ventilated, but this was slightly remedied by a wood fire, which served to establish a current of fresh air from without. There were extensive suppurations, and some deaths of persons who, in favorable circumstances might have recovered.

"You inquire the result of my experience in amputation for *tetanus*. I think unfavorably of it. I have amputated twice without any benefit. The disease has extended to the spinal cord. Actual cautery over this with an iron brought to a white heat is reported to have saved life in some cases, but I have seen no case of a cure, by any treatment, of an established *tetanus*. For preventation of traumatic tetanus after a battle, I deem it of great importance to graduate the covering and clothing of the wounded, according to the temperature of the air. Hot days suc-

ceeded by cold nights are among the prominent causes of tetanus in armies and in ships of war.

"Yours very respectfully,

"USHER PARSONS."

Primary amputations, in the meaning of the term as now employed by most surgeons, are amputations made during the first twelve, twenty-four, or forty-eight hours, but not until after the severity of the shock has passed off, and more or less complete reaction has taken place in the general system. When writers speak of "primary" amputations, therefore, they intend generally to exclude from consideration "immediate" amputations.

Secondary amputations, as distinguished from primary, are those made, not immediately or soon after complete reaction has ensued, but after the inflammation consequent upon the injury has subsided, when perhaps suppuration has already commenced, or even at a later day.

The next question to be determined, then, is as to the relative safety of amputations made after reaction has ensued, and prior to the occurrence of inflammation, on the one hand, and amputations made after the inflammation has subsided, on the other hand.

In *civil* practice, secondary amputations are almost universally admitted to have been more successful than primary, the only real point at issue being, what has been the result of experience upon this point in *army* and *naval* practice; and we shall presently see that here surgeons differ pretty widely, but that at the present moment the great weight of authority preponderates upon the side of primary amputations. In fact, if we would look for advocates of secondary amputations in military practice, we shall have to seek for them mainly among army surgeons of the last, or in the early part of the present century. Faure, who was at the battle of Fontenoy, says, "Amputate after the subsidence of the first symptoms, and when suppuration is produced." John Hunter adopted the same views. Baron

Percy, in 1792, taught a similar doctrine; and in our own century, Blandin and Mann have arrayed themselves upon the same side: while Petit, Le Dran, Broomfield, Boucher, Guthrie, Hennen, Roux, Rush, Armand, and a host of others, have decided in favor of primary amputations.

Dr. John L. Stone, surgeon to the Bellevue Hospital, New York, in the November No. for 1849 of the *New York Journal of Medicine*, has given the most complete statistical record of the results of primary and secondary amputations which we have seen; and he sums up his conclusions, in part, as follows:

Primary amputations of the upper extremities are to be preferred both in military and civil practice, being more successful than secondary in both.

Primary amputations of the lower extremities are twice as successful as secondary in military practice.

There is another view of this important question which needs to be stated, and for the presentation of which, in a reliable and statistical form, we are also indebted to Dr. Stone. We refer to a comparison of the results of both primary and secondary amputations, with no amputations at all!

We believe that, after Bilquer, Malgaigne was the first to make the startling announcement that in the attempt to save the limbs, we run no greater risk than we do in amputating them; his opinions being founded upon his experience in the campaign of Poland, "where, in an army of 80,000 men, neither he nor his colleagues succeeded in saving a case after amputation of the lower extremities." and also upon certain results furnished by the statistics of the Parisian hospitals, where, during a period of three years, the mortality was seventy-five per cent.

It is well know that after the "Astor House Riot" in the city of New York, all of those whose limbs were amputated died. The amputations were primary. While, according to the statements published by Dr. George D. Gibb, of the wounded in the Parisian hospitals after the revolu-

tion of June, 1848, only six deaths occurred in compound fractures of the thigh out of the twelve cases in which an attempt was made to save the limb. These were all gunshot wounds; but it must not be forgotten that so far as the management of the patients was concerned, subsequent to their injuries, they were in the conditions of civil practice.

M. Baudens, surgeon of Val de Grace, and late Army Surgeon in Algiers, and Drs. Walker and Pierson, of Massachusetts, have also done much towards arresting the indiscriminate sacrifice of limbs after complicated fractures. We are not, however, at present prepared to decide all the points in this delicate question, especially as applied to Army Surgery; and while we may hope that the facts brought together with so much care by Dr. Stone may save some limbs, and perhaps lives, by judicious treatment, and without resort to amputation, we may be permitted to express a hope, also, that it will not lead surgeons to indecision and fatal delays, especially upon the field. Certainly we are in no danger of adopting the extreme views of Bilquer and Malgaigne, by rejecting amputations altogether.

In army practice, just here is one of the great points of difference as compared with civil practice; in the former, patients have to be moved often, and to great distances, which render quiet to the limb, and many other hygienic attentions, actually impossible; yet it is upon these alone that the surgeon can rely to save mutilated members. Moreover, it is a matter of great importance for the safety of other patients crowded into the same wards, that suppuration and animal decomposition shall be prevented as far as this can be done. A military ward, filled with suppurating and sloughing wounds, would soon become untenantable by the generation of poisonous gases. In these circumstances, almost peculiar to military practice, we see some good reasons why primary amputations are likely to prove more successful, and why army surgeons have so generally conceded to them the preference.

If an attempt is made to save a limb badly lacerated and broken, certain conditions in the treatment are necessary to success.

All projecting pieces of bone which cannot be easily replaced and are not firmly attached to the soft parts, must be at once cut or sawn away.

All foreign substances, such as fragments of balls or other missiles, pieces of cloth, wadding, dirt, &c., must be removed.

Any portions of integument, fascia, or muscles, which are entangled in the wound, and prevent a thorough exploration, or may obstruct the free escape of blood or of matter, must be freely divided.

Counter-openings must be made at once, or at an early period after the formation of matter, to permit its easy escape.

The limb must be placed in an easy position, and not confined by tight bandages, or forcibly extended by apparatus.

Inflammation must be prevented or controlled by constitutional and local means, and especially by the use of water lotions whenever its employment is practicable.

If joints are implicated, they must be laid freely open, and placed at perfect rest, without adhesive straps, bandages, or other means of compression.—*Military Surgery.*

Obstetrics.

Treatment of Inflammatory Affections of the Female Breast.

BY W. H. BYFORD, M. D., OF CHICAGO.

After fully describing the character, of these affections, Professor Byford comes to their treatment. He arranges that for inflammation of the nipples under the heads of prophylactic, palliative and curative. The nipple must be prepared for its duties. The causes operating upon it produce abrasions, and their action is facilitated by the natural and acquired tenderness of the structures, particularly the epidermis and skin. Hence these must be hardened. The nipple should be covered lightly during pregnancy and nursing; the thinner and more permeable the covering the better. It should freely admit the air. At the same time the organ "*should be subjected pretty constantly to moderately rough friction.*"

An excellent dressing for the nipples for the last two months, is a rough, coarse sponge, so cut as to cover the areola; surround and cover loosely, but touch every part of the nipple. Over this there should be but one thickness of clothing, so as to allow of the evaporation of fluid as fast as secreted, and the free admission of air. In cold weather, of course, the parts should be covered more when going out. The nipples should be occasionally moistened with water, and allowed to dry slowly; friction with a dry towel or the fingers will assist.

During lactation the same rules should be observed, and after nursing, the nipple should be wiped clean and dry before being covered. A little glycerin or olive oil will prevent cracking. When inflammation comes on, pallia-

tives and curative measures are demanded. The healing process being continually interrupted by the performance of the functions of the organ, it is necessary to protect the part from the effect of these interruptions.

Artificial means are required, which intervene between the mouth of the child and the nipple. For this purpose the shield must be employed. This should be made in the form of a conical hat, having a rim, a crown cavity, with a draught tube rising out of the top for the passage of the milk. This rim should be large enough to cover the areola, the crown passing over the nipple, merely touching it on the sides. If the abrasions are on the summit of the nipple, the shield should be so deep that, when drawn, the top of the organ will not touch, or else it will cause pain. But if the cracks are on the side or base of the organ, then the cavity of the shield must be shallow, so that the top of the nipple touches its bottom in such a manner as to prevent any stretching, and to bring the pressure entirely on the top. In this latter case, the bottom of the cavity should be as smooth as possible, and correspond in shape to the summit of the nipple, in order to prevent unequal pressure. A soft linen rag, properly adjusted over the draught tube, is preferable to any other envelope.

M. Legroux mentions the following ingenious contrivance. He applies this mixture:—

℞.—Collodion, p. xxx;
Ol. Ricini, p. ss;
Ol. Terebinth, p. jss.

This is quite adhesive, and dries less quickly than collodion, on the areola with a brush, so as to encircle, but not touch, the nipple for the width of an inch. While yet soft the nipple is covered with gold-beater's skin which is pressed well down upon the mixture. Thus is formed a smooth and pliant covering. Holes are pricked through the skin with a needle, to allow of the passage of the milk. Before sucking, this must be moistened with sugar and milk.

The curative means for sore nipples are various. The

same will not do for abrasions as well as ulcerations. Nature is to be imitated by forming a cuticle for the part.

Abrasions may be covered with starch and mucilage. The following is a good mixture:—

℞.—Cerat. Alb. ʒ ij;
Ol. Amyg. Dulc. ʒ j;
Mel. Despum. ʒ ss. M.

Dissolve with gentle heat, and add Bals. Canad. ʒ ijss.

Apply each time of nursing. When the cracks are deep, close them by pressing their edges together, and covering with collodion in a thick and wide coat; this must be renewed when found necessary. When ulceration exists, it will be acute or chronic. Act as for this affection elsewhere; deplete, if acute, by leeches, and apply cold emollient poultices; or envelop the nipple in a thin layer of thick mucilage, covered by oil-silk, so as neatly to fit the organ, kept cold by ice applied in a bladder. When these remedies are not necessary, apply mucilaginous and bland ointment applications. Alum and tannin are good at first; sulphate of zinc and borax come next in respect to time. One scruple of tannin to one ounce of rose-water, five grains of alum, or sulphate of zinc are useful in the early stages, when the acute symptoms are subdued.

The following are useful:—

℞.—Sodæ Subborat. ʒ ss;
Glycerin, ʒ ij;
Aq. Rosa. f ʒ jss.
M. Use as a wash after sucking.

℞.—Sodæ Subborat. ʒ ij;
Cretæ Præp. ʒ j;
Spt. Vini,
Aq. Rosa. *aa* f ʒ iij.
Mix and dissolve.

The latter may be used when the ulcer is becoming indolent. In the chronic form strong astringents and stim-

ulants become necessary. A skilful use of the sulphate of copper and nitrate of silver will shorten the course of these ulcers. The latter applied solid to the surface, not oftener than once in eight days, is excellent. In the interval the sore may be dressed with tannin or alum in solution. When irritable, an ointment may be used, made of belladonna, hyoscyamus, or opium. One very good expedient, which will often entirely change the character of the ulcer, is to anæsthetize the part with ice, as practiced prior to operating.

When the lymphatic glands become affected, antiphlogistic measures must be employed; and when chronic, alteratives, tonics, liniments, etc., according to the peculiarties of the case. The treatment of milk abscess is of great importance. It should be prevented if possible, by proper management at the outset. When the nipple is deficient, or, from any cause, prehension is deemed impossible, it is decidedly improper to attempt nursing. In other cases, prolonged and judicious efforts should be made to render the organ useful. The first thing is to take perpendicular pressure off the top of the nipple, by some device to prevent the dress from forcing it in, and this, if possible, should be commenced early in pregnancy. For this purpose a shield should be employed, which will cause a pitting of the anterior surface of the breast, and a projection of the nipple. When called upon to treat a rudimentary nipple, after parturition, the effect must be more prompt. In many cases the organ may be made available by causing it to erect itself by simple titillation by the finger, and immediately applying the child; or by placing a thick layer of collodion, around it on the areola, which, drying, elevates the nipple. Then, by keeping the reservoirs empty, abscess is prevented. To aid in this we have various tubes and pumps, but all of which are objectionable. A puppy is often used, but it likewise is liable to irritate and excoriate the nipple. The only proper way is by the mouth of

an adult, varying the pressure or force, to suit the tenderness of the part.

A very useful class of measures are those to suppress the secretion, and thus relieve the distention, as opium in large doses, or applied as an ointment; but belladonna seems to have acquired most renown. Numerous instances are reported of its great value in such cases. Much depends upon its strength and application by inunction till the production of its characteristic effects upon the system. Cold, as a local remedy is beneficial. The temperature of the breast for this purpose should be kept steadily at about 40 or 45 degrees, as by water running through an india-rubber bag enveloping the organ, or the application of a bladder. No bad effects are to be apprehended from it. Internally, a saline cathartic may be given every other day, and two grains of iodide of potassium every four hours will materially assist.

Acute inflammation, the effect of congestion, is apt to be extensive, and will require energetic treatment. Warm fomentations may be applied for the first few hours with the hope of establishing the secretion of milk. A decided venesection will often turn the balance in favor of resolution. Immediately after this, the use of the veratrum viride may be commenced in doses of six drops every four hours, till the pulse is brought down below the normal standard, and then kept there. One grain of calomel with a quarter of a grain of sulphate of morphia, may be given, if the pain is urgent, say every four or six hours. A lotion of one part of sulphuric ether to two parts of alcohol will be a good soothing adjunct, after the inflammation becomes permanent. These measures should not be abandoned for warm poultices until suppuration is clearly evident, by which plan we may often limit the extent of this process. In this state of the gland, the most moderate means only should be employed to draw the breast. Retained milk is not the cause of inflammation here, as in milk abscess. If glandular inflammation is complicated with that

of the reservoirs, the treatment for both must be combined as local and general antiphlogistics with means to arrest the secretion and empty the reservoirs. Chronic inflammation will be cured by treatment similar to that for other glandular inflammations, as leeches, mercurials, iodine, and vegetable alteratives, internally and externally. Much reliance can be placed upon well-regulated and graduated pressure with adhesive straps, pressing the diseased part against the ribs; or with collodion thoroughly incasing the breast. When pus forms, evacuate it early, though where the abscess is deep, it is desirable to wait until the pressure from within has caused condensation of the overlying tissues, otherwise a large opening will be required. In milk abscess the earlier and smaller the opening the better. The effect of suppuration and evacuation of a milk reservoir is often to destroy its cavity, but in some cases a milk fistula is formed. This may be closed by an occasional application of the nitrate of silver.

Worse than these are the tortuous lacunæ, that sometimes result from the deep glandular abscess of the breast, and which are generally very difficult to cure. Injection of iodine is most to be relied upon. This may be done by inserting a soft, flexible catheter to the bottom of the canal and throwing the injection through it so as to apply it without dilution to the bottom of the fistula. This favors the shallowing instead of the narrowing of the cavity. Of course it is never advisable to slit up these obstinate puriferous ducts, because of the amount of tissue that might be damaged, which it is desirable to save.—*Chicago Med. Ex.*

Cancer of the Uterus.

BY M. ARAN, OF PARIS.

Deep-seated cancer of the uterus is situated in the cellular tissue of the fibres of that organ. In any form, it makes for itself a cavity by displacing the neighboring muscular fibres, which, with the mucous membrane, are generally healthy. Soon new deposits occur, and then these tissues become atrophied and disappear. The morbid matter softens, the tissues ulcerate, and the hardness and projections are replaced by irregular excavations with jagged edges, and bathed by a sanious fetid fluid.

Superficial or mucous cancer commences with hypertrophy of the papillæ and follicles of the mucous membrane; but we may have it either continuing thus as a *vegetating* cancer, or in other cases it may become of the *ulcerating variety*. It first appears most generally in the form of very fine mammillated projections, like shot or sand, which may be either hard or soft. The epithelium is not destroyed, and in some cases it forms foliated lamellæ separated by furrows. In others the epithelium may accumulate and form polypiform tumors. In this, especially, vascularity abounds, causing frequent and profuse hemorrhage which soon exhausts the patient.

The *ulcerated* form may be circumscribed or diffused. It is rarely primitive, most commonly following the other forms. Even in the vegetative form, when it appears to have an outward tendency, the cancer extends into the subjacent tissue by the multiplication of epithelial elements, and also determines the deposition of epithelial tumors in the subperitoneal cellular tissue, or in the uterine appendages, as well as in the vagina, bladder and rectum. When ulceration of the surface of the cancer has commenced, a similar process is set up in the more deeply-seated

and distant deposits, and fistulous communications are formed between the different organs.

These two forms of cancer do not possess the same amount of danger. The deep-seated is more grave, in infecting the system more rapidly and being less accessible to local remedies. The superficial may be advantageously treated by caustics. One case was thus cured five or six years ago, and is yet living. Death occurs less frequently than when other organs are affected; the most common causes are peritonitis inflammation of the psoæ muscles, or phlegmasia alba from obliteration of the veins. In some cases the uterus may be compressed by the tumor, and dilatation occur above the point of pressure; hydronephrosis or distension of the kidney by urine takes place, resulting in uræmic phenomena.—*Gaz. des Hôpitaux.*

On the Continuance of Ovulation During Pregnancy.

BY PROF. SCANZONI.

Prof. Scanzoni enters into some speculations concerning the continuance of ovulation during pregnancy. His opinions have been recently contested by Kussmaul. Scanzoni argues, that since the bursting of the Graafian vesicle and its consequences are entirely the result of the menstrual hyperæmia of the ovarium, and that the latter can differ greatly, the conclusion must be granted that the menstrual prolegomena are not always or necessarily connected with the bursting of the follicle which embraces a ripe ovum. He reasons ingeniously to prove that although he is unable to show fresh-bursts Graafian vesicles in pregnant women, yet there are strong grounds which render it more than probable that there persists a periodical ripening of ova during pregnancy, although without bursting of the follicle. But the reasoning is essentially speculative, and takes too little account of opposing facts.—*Brit. and For. Med.-Chir. Rev.*

Pathology and Treatment of Diseases of Menstruation.

BY ALFRED B. TUCKER, M. D., SAVANNAH, GA.

There is probably no class of diseases which so completely and continually baffle the skill of the physician as those named at the head of this article. The remedies used are those supposed to possess an influence over the uterus; and menstruation itself is looked upon as a physiological function of the womb, no *practical* attention being paid to the cause of the discharge, though physiology has left no doubt as to the relation existing between the various parts of the procreative system.

Now, it is an acknowledged fact, that the *ovaries* are the organs mainly concerned in the function, the womb itself having no more influence on it than the bladder has upon the function of the kidney, though we would not be understood as asserting that the womb is like the bladder, merely an outlet for the secretion. The secretion takes place in the uterus; but, as I say, in another place, it is merely the result of a reflex act, originating in the ovaries. At each recurrence of the twenty-eighth day, an ovum matures and bursts, and synchronous with this the menstrual flow takes place. It is purely a reflex act; why it should follow the maturation of the ovum, of course we cannot tell any more than we can account for the effusion of the bile or pancreatic juices upon the presence of chyme in the intestines. But it is nevertheless true; and before puberty, at which time the maturation of the ova first takes place, menstruation does not occur: and after this maturation ceases to be effected, menstruation ceases.

Again: this bursting of the ova does not take place during either pregnancy or lactation, as a general rule, nor does menstruation occur during the same periods.

If abortion should occur, it does so at a regular recur-

rence of the menstrual period, unless such miscarriage should be the result of traumatic causes. And labor, unless brought on by the last mentioned causes, occurs at the end of 280 days, which is a multiple of 28, the regular period of menstrual return.

Again: menstruation, abortion and regular labor, are accompanied by severe pain in the back, near the seat of the ovaries, and I think, it could be reasonably shown to be ovarian pain; but my limits will not permit me to enter upon a proof of this.

If the above premises are correct, I think there is little difficulty in reducing the diseases to a rational plan of treatment. And I claim that the true seat of disease in menstrual difficulties is to be found *in the ovaries*, and they should be the object of attack in our treatment.

Now we have the disease of menstruation of three kinds, amenorrhœa dysmsnorrhœa, and menorrhagia, and leaving out of view those caused by malformation, and requiring surgical interference, we shall treat them all as a class, merely looking upon the various conditions of the ovaries in there pathology as causing these various diseases, according to circumstances and laws which we cannot comprehend. Nor is this assumption surprising or untenable, when we remember that opposite conditions produce the same effects, in other organs, that anæmia and plethora both produce delirium, and that both produce, sometimes, coma, and sometimes insanity, according to circumstances that we cannot comprehend.

We recognize, then, two conditions of the ovaries as giving rise to menstrual disease, congestion and anæmia, sthenic and asthenic causes. And just in proportion as these conditions obtain, we have one or the other of the diseases of menstruation. For example, a woman during the period of menstruation gets her feet wet, and the discharge suddenly ceases; she has fever, a full, strong pulse, and hot skin, all evidencing congestion somewhere, and which, from the history of the case, we readily place in the

ovaries. Congestion or hyperæmia thus produces suppressed menstruation: or the attack may not proceed so far, and with the generation of great pain, you have dysmenorrhœa developed in future attacks. Now, a plethoric female, in whom we see the evidences of hyperæmia, has menorrhagia; so that too much blood in the ovaries may produce any of the three disorders of menstruation.

It is equally true of anæmic causes. The chlorotic girl has anæmia and amenorrhœa; or she may have dysmenorrhea; and it is frequently the case that profuse menstruation may be traced to an anæmic condition of the system.

Now, these opposite conditions, in producing these diseases, are merely analogous to diseases produced in other organs. A certain amount of blood is necessary to stimulate the nervous system to action; if there is too much, it seems to clog, as it were the action, if too little, it does not stimulate enough. Whatever may be the true explanation, the fact is undeniable.

We reduce, then, the diseases of menstruation to these two classes of causes—anæmic and hyperæmic. Another fact, frequently mentioned, and bearing directly upon this subject, I shall barely notice; it is the analogy between the *ovaries of the female and the testicles of the male.*

The treatment which I would propose, is easily deduced from the pathological view given. It is merely on general principles, relieving congestion by the means ordinarily recommended, and overcoming anæmia by the drugs commonly used.

There is, however, at least one remedy, which seems to have a direct action upon the ovaries, and which I have used in a few cases in the last six months; it is *lupulin.* Now, this remedy has a good effect in the male, when used for nocturnal emissions; it was recommended for this purpose, several years ago, by Dr. Wm. Byrd Page, of Philadelphia, in whose hands it had proved a potent remedy. Acting upon this fact, I used the remedy in hopes it would quiet the ovaries as effectually as it did the testes. We would not be un-

derstood as saying that the same kind of excitement exists in both sexes. The bestial passion in the one, has, we rejoice to believe, no place in the purer minded sex, but is merely a disease, beyond the power of her mind or thoughts. I found the effect was the same, and have never found any remedy control the diseases of menstruation more effectually than this.

The principles on which this was determined, would point to cantharides as being useful, in cases of anæmia, amenorrhœa, or menorrhagia. I have, however, no experience with this remedy, though I believe it would be found efficacious.

One practical result is worth a hundred theories, and I will give two or three cases; in which I have followed the thoughts here suggested.

Case 1. During the past summer, a young lady applied to me with menorrhagia; she said she had never been regular, menstruating every fourteen days for seven days, thus being free from the discharge but fourteen days in the twenty-eight. It was this case which first started me in the train mentioned in this article. I determined to try lupulin and gave the following pills:

℞.—Vallet's Carb. Iron, } *aa.* grs. iij.
Lupulin, }
Sig. One three times daily.

The second dose stopped the discharge, a result that could not be attributed to the iron and must have been due to the lupulin. The prescription was continued, with the addition merely of a grain of rhubarb, to obviate the constipation produced by the lupulin.

At the recurrence of the fourteenth day, she was affected with all of the symptoms of menstruation, except discharge, pain in the loins, being, as usual, a prominent symptom. An injection of starch and laudnam was used, which quieted the symptoms, and the period passed without any discharge.

Fourteen days thereafter, being 28 days from the com-

mencement of the treatment, the medicine was discontinued (to enable nature to accomplish the routine) for six days and again commenced. As the result of treatment, she is now perfectly well, and has never had any recurrence of the disease.

Case 2. A negro woman, of this city, miscarried four weeks ago, and is now suffering from profuse menstruation, with violent pains in the back, about the lumbar region. Ordered—

℞.—Lupulin, ℈ i.
Biv. in Pulv., iv.
One every 3 hours.

The next morning her pains were relieved, and she was better; but later in the day, owing to the cessation of the medicine, the pains returned, with more profuse discharge.

℞.—Lupulin, ℈ i.
Sugar of Lead, grs. v. make iv powders.
One every three hours.

I confess I gave the sugar of lead with no confidence in its powers, but rather in deference to the prescribed ideas of the profession. The medicine relieved the pain, checked the discharge, and in four days she was well.

Having offered these suggestions to a professional friend in this city, he offered to give it a trial in a case of dysmenorrhœa, then under his charge. The directions were not carried out by the patient, the medicine not being persisted in long enough; but even with this drawback, I learn the pain was very materially lessened at the next period. This case was the result of wet feet, during the flow of the menses.

In a case of threatened abortion, in which the pains were decided, and especially lumbar or ovarian, I used lupulin giving 10 grains. The pains immediately ceased, and the miscarriage was prevented.

I have thus barely alluded to this subject, and have left many links in the chain to be filled up by the profession.

I commend the subject to them as worthy their attention, and if I shall be in any way instrumental in relieving the sufferings of those who are the better part of our race, I am amply repaid for my labor.—*Savannah Jour. of Med.*

Therapeutics.

Thermo-Therapeia, or the Heat Cure.

BY MR. ERASMUS WILSON.

For a knowledge of thermo-therapeia, medical science is indebted to Mr. Urquhart. Thermo-therapeia is the application of atmospheric air at a high temperature to the surface of the body for the relief of pain and disease. The poets used the expression "bathed in light;" if we adopt the same language in reference to air, we may style the process a bathing in hot air, or a hot air bath; but in no other sense does the term "bath" apply to its use. I will endeavor to trace my own experience on my first introduction to the thermæ, now some time back. It was the winter time, the season bitterly cold, my inception as a "companion of the bath" took place in the private thermæ of my esteemed friend Mr. George Witt, of Prince's Terrace Hyde Park. As an example of simplicity of construction, Mr. Witt's thermæ may be usefully taken as an illustration. He had at the back of his house a room, twenty feet long, by ten feet in breadth, and twelve feet high, with a window looking out upon a lead-flat, such as is common in London houses. To convert this room into a thermæ, he divided

it into two compartments by means of a wall which crossed it about one-third from its further end. He had thus two apartments, an outer one, the cooling room or *frigidarium* of the Roman thermæ; and an inner one entered by two small doors (inner and outer) in the partition wall, the *caldarium*, *calidarium* or *sudatorium*. Having left my garments in a portion of the outer apartment which served as a *vestiarium*, and girt about the loins with a *cummerbund*, the kilt of oriental nations, I entered the calidarium; the temperature was delicious, such a contrast with the exterior world! The wind and snow were raging without, while here was a paradise of 135 degrees of Fahrenheit. Within this hallowed nook anxiety and care and fatigue, like the burden of Bunyan's Christian, seemed to fall from my shoulders; I stretched forth my limbs in peace and enjoyment; the brain seemed to think more lightly and pleasantly, and my ideas flowed brightly and calmly.

My friend, Mr. Witt, in the course of a few minutes, was streaming with perspiration, which ran down his face in rills and dripped from his elbows and finger ends in continuous drops, while my skin was as yet dry. I was struck also with the rich and healthy complexion of his skin; it took its hues from the free circulation of the pure arterial stream through the capillary plexus of the derma; as he drew his fingers forcibly across his chest, the white traces left by their pressure were instantly replaced by the glowing vermilion of the arterial blood. There were no gorged capillaries in that skin; no venous transformation in that cutaneous plexus; no deposits of unhealthy coloring matter either in the cuticle or in the tissues beneath; no pallor, no excess and no deficiency of fat; no choked pores; no wrinkles from loss of elasticity and contractility of the fibrous and muscular structures of the corium; no abnormal or deficient sensibility of the nerves—all was as nature made it, perfect and beautiful. I looked for the first time in my life on a really healthy skin. How very curious and striking was the difference between my friend's skin and

that of every one present; one gentleman, a finely built, handsome man, with a remarkably capacious chest, had too great a preponderance of adipose tissue, while the hue of the skin in an oblique light was a bright golden yellow. In another, the muddy tinge of the skin discovered the impure and muddy condition of the blood. The habitual use of the thermæ removes these discolorations, these indications of imperfect elimination by drainage through the perspiratory system, and while it gives beauty to the skin, bestows health on the entire economy. After a free perspiration of half an hour's duration, I was anointed with soap and had a rub down with a wisp of white fibre called *lyf*, the fibre of one of the palm trees commonly used in the East for the purpose to which it was now being applied. To the friction with soap succeeded a shower of warm water, then a douche of cold water, after which I was made to sit still for some minutes until the warmth of the skin was restored.

From the calidarium I passed therefore to the frigidarium, and on this occasion, midwinter and a piercingly cold snowy day, truly deserving its name. I was then *cloaked* in a sheet taken from one of the pigeon holes of the *columbarium* standing in the corner of the room, my *cummerbund* was allowed to drop on the floor, and I was made to recline upon a cane couch immediately under the open window. How cool and pleasant were the puffs of wind that played over my face and limbs—how different their impression on my skin to what they had been an hour before! I needed not the assurance of my friend that there was no fear of catarrh or bronchitis; my own feelings told me that I could resist any amount of cold, and I was obliged to suppress a longing to walk out upon the leads with no other covering than my sheet into the midst of the sleet and wind; had the lead flat been a terrace or a lawn, I could not have resisted the temptation. After awhile I exchanged the horizontal position on the couch by the open window, to a sitting posture; the sheet was thrown off from my back and

limbs; the moisture of the surface was dried up, no wiping excepting of the head and face was practised or required; the skin felt smooth and warm, and I was permitted to dress, but with the injunction that I was to dress leisurely lest the perspiration which had ceased, should again be excited. It is worthy of notice that great attention is paid to the temperature of the skin during the curriculum of the thermæ; after the cold douche, we return to the calidarium to recover any waste of heat; and in the after cooling of the body in the frigidarium, the whole of the moisture must be dried off the skin, and perspiration must be wholly suppressed, as indicated by a peculiar smoothness and polish of the surface, before we are qualified to resume our dress. All clamminess of the skin must have ceased entirely before we resort again to our usual coverings.

Among my fellow subjects for the thermæ, I have seen numerous examples of relief from painful affections dependent on morbid composition of the blood. Several were cured of gout, of rheumatism, of neuralgia. A clergyman and doctor of divinity, who resorted to the thermæ to reduce redundancy of adipose accumulation, suffered habitually during the winter season from catarrh, bronchitis, and neuralgia, and was often laid up for weeks together with these affections. Since he has adopted the use of the thermæ, which he enjoys excessively, he has diminished in bulk, he has lost all proneness to catarrh and bronchitis, and no longer experiences the pangs of neuralgia. Recently I was much interested in seeing a case of eczema of the face treated throughout by the thermal process alone; the patient lived in the thermæ for several days, he used very high temperatures, and he succeeded completely in curing his disease. It was curious, he remarked, to observe the patches of eruption; they yielded no perspiration and looked like so many parched up islets in the midst of the surrounding copiously perspiring skin. At about the same time a medical friend consulted me for prurigo senilis. "You know Mr. Witt; go and ask him to admit you to his thermæ,"

was my counsel. The next time I paid a visit to my friend's thermæ, there was my elderly patient luxuriating in the fullness of enjoyment. That day he left his prurigo senilis behind him in the calidarium, and I believe has had no reminder of it since. He went back to his home on the coast, and now offers a seat in his own thermæ to his curious or suffering friends.

I have hinted at the curative effects of very high temperatures; and both Mr. Urquhart and Mr. Rolland have mentioned to me important results from this process. It occurred to Mr. Urquhart's mind that as fever heat was represented by 112°, he should be able, could he create a temperature higher than fever heat, to supersede the stage of fever at once. Thus, taking the beginning of the cold stage, which nature seemed to struggle painfully to overcome, he was enabled by a high thermal temperature to cut it short at once and to pass over it and the hot stage to that which nature seemed desirous of reaching, namely, the sweating stage. He believes that at a certain temperature he can put a stop to the fermentative process of zymotic diseases; and at a higher temperature still, destroy animal poisons. He suggests, moreover, a curious and important inquiry, namely, the influence on the chemical composition of the blood circulating through the capillary plexuses of the skin, of hot air having a temperature of 160° of Fahrenheit. Not so much its influence on the healthy blood as on the blood of persons in a state of disease.

A member of Mr. Urquhart's family, a child, was accidentally burnt; the burn was distressingly painful; various applications had been made, without relief; the child was accustomed to the thermæ, and desired to go into it; it was carried into the thermal chamber, and the pain of the burn was immediately assuaged. Mr. Urquhart himself received a severe scald; he betook himself to the thermæ; there in a heated atmosphere he directed upon the injured part a blast of air hotter than the temperature of the apartment; the pain became lessened, the process of effusion, which

results in the production of a blister, was arrested; to use a popular expression, "the heat had drawn out the heat."

Looking at the thermæ in a social and political point of view, we find that it is wonderfully adapted for the preservation in health of large bodies of men, combining in itself the respective advantages of air, exercise, and ablution. Adopted by our own army, there cannot be a doubt that it would very considerably reduce the rate of sickness and death, and add to the efficiency of the men. It is applicable, also, in all cases where numbers of persons are collected together, as in barracks, prisons, poor-houses, factories, and schools; in large business establishments, where a considerable number of young men or young women are assembled; or in places of temporary meeting, as the House of Commons and clubs. It must always be borne in mind that the thermæ not only offers advantages as respects physical health, but it also conduces to moral vigor. But the usefulness of the thermæ has even a wider sphere; the Londoner, or the inhabitant of a large city, would live as healthy immured within his city walls as the rustic amid the fields and meadows of the country. His thermæ would be to him in the place of a country house, of a horse; it would give him air, exercise, freshness, health, and life.

I might add very materially to the long list of conditions to which the thermæ might be applied with advantage, but I limit myself to a single one more; it is that of extensive works, employing a large number of men, either in operations in themselves unsalutary, or in unhealthy localities. The importance of preserving a body of working men in a state of health, and in the best condition for the performance of their duties, must strike every one, and is an object worthy a moderate sacrifice on the part of proprietors or owners. There are many localities in which miasmatic fevers abound, and constantly incapacitate the working force of large operative establishments. I believe that a few pounds expended in thermæ would correct this evil; would put the men into condition to resist the miasmatic

force, and to eject the poisonous elements from the blood when they had already found admission into the organism. *Dublin Medical Press.*

Blood-Letting as a Therapeutic Agent.

BY J. B. MURFREE, M. D., MURFREESBORO', TENN.

[Read before the Rutherford County Medical Society.]

MR. PRESIDENT:—At the last meeting of the Rutherford County Medical Society, I was appointed to prepare an article upon blood-letting, to be read at the present meeting, and in discharge of that duty I here present to the Society the views of the subject, as it presents itself to my mind, not unconscious of the many imperfections which encumber this dissertation. Had I the ability to bring before the Society this subject in its proper light, and to set before them, in a graphic manner, all its bearings and attendants, the short time in which I am compelled to prepare this article, would not suffice to enable me to lay the subject entirely and clearly before them, for their consideration. But I shall endeavor to present this subject to the Society in a few words, and in a concise manner, and to set forth such views as seem to be the true ones, not attempting or claiming any originality in the views presented.

When and how blood-letting, as a curative agent, originated, would be an interesting inquiry, but one that is surrounded by difficulty and obscurity, the correct solution of which would probably be impossible. But it is satisfactory to know that the inquiry is interesting, more from the curiosity that would be gratified than the usefulness that would be gained by a correct solution of the problem.

Blood-letting was probably among the first remedies made use of by the followers of the healing art, to overcome disease. As far back as we are able directly to trace medicine as a science, we find that blood-letting was in use. Hippocrates, who was among the first writers on medicine, and who lived more than two thousand years ago, was acquainted with the principal modes of blood-letting, as they are practised at the present day. In his writings he at different places recommends the abstraction of blood, both locally and generally. Galen was well acquainted with blood-letting, and was one of the first to dispel that erroneous doctrine of the ancients, that arteries contained air. The ancients held the belief that the air drawn into the lungs by inspiration, was carried to the heart by the pulmonary veins, and from this distributed by the arteries throughout the whole system. Galen was the first to combat this idea, and by cutting an artery and seeing the blood flowing from it, he proved conclusively that arteries contained blood and not air. But still Galen's idea of the circulation was very crude and imperfect; and until the time of the immortal Harvey, the ideas and theories of the circulation were very imperfect and false, and would in the present state of science be considered utterly ridiculous.

Blood-letting has ranked high in the catalogue of remedial agents in every age, and scarcely has any remedy passed through so many wars and yet vascillated so little as this has. After the trial of hundreds of years as a therapeutic agent, of great power and so potent for good, it is still held up to the medical world as an agent powerful in overcoming disease. There has been a great revolution in the minds of the medical world in regard to this powerful remedial agent. Not a great many years ago bleeding was resorted to in the the treatment of almost every disease, no matter what was the nature of it, and the amount of blood that was occasionally drawn is almost fabulous. The celebrated Dr. Dewees was bled to the amount of 90 ʒ at one

time. He drew 120 ʒ, within five or six hours, from a woman seized with convulsions at the commencement of labor. There is a case recorded where a patient was bled to the amount of nearly 2½ gallons within a few days. But such a general resort to blood-letting, and the extent to which it was carried a number of years ago, has justly fallen into disrepute. Now the opinions of medical men are very much changed, and instead of carrying blood-letting to the extent that it once was, there seemes to be an inclination on the part of some to carry it to the other extreme. In this country, as well as in Europe, may be found men of distinction, who are very much opposed to the use of the lancet, except to a very limited extent. And some even go so far as to discard it entirely from their practice. We may very reasonably, to a certain extent, account for this change, and I would not condemn those bold practitioners of former times as utterly ignorant of the use of the lancet, though they did sometimes bleed too much, and bled patients who would have been better off had they been put on the use of tonics. It seems probable to suppose that there has been, to some extent, a modification in the type of diseases; and the change that has been produced in the constitution of individuals by the manner of living at the present day, would, to a certain degree, contra-indicate bleeding to such an extent as was formerly practised.

Blood-letting is a powerful remedial agent, and one that is capable of producing mischievous results when indiscreetly and indiscriminately used. And that it has often been carried too far, and used to the great detriment of the patient, cannot be denied. Alas, this has too often been the case. But this is, in reality, no argument against the judicious use of the remedy. Shall a remedy be discarded because it has been indiscriminately used by the injudicious and ignorant, and has, when thus used, been productive of much harm. If this be the case, down go all of our most valuable remedies, and our treatment, by which we have been able to overcome many diseases, and to hold

others at bay, degenerates into a mere expectant plan of treatment. The intelligent portion of the medical world will all, I think, condemn the indiscriminate use of blood-letting; and so will they condemn the indiscriminate use of any medicinal remedy. But that it admits of proof that bleeding, when used judiciously, and under proper circumstances, is productive of the happiest results, and in certain cases is almost indispensable.

The effects of blood-letting upon the system are those of a powerful sedative. It lessens the action of the heart and arteries, diminishes the amount and momentum of the circulating fluid, reduces the fullness and frequency of the pulse, lessens the number of respiratory movements, reduces the heat of the surface, diminishes plethora, produces a change in the quality of the blood, reducing its elasticity, thereby tending to prevent exudations; diminishes secretions, increases absorption, relieves congestion, and tends to promote the action of other remedies. Such are the generally observed and admitted effects of blood-letting, as ordinarily met with. But should the loss of blood be carried to a further extent, we have syncope supervening as a result of the loss of blood. Then there is a cessation of the heart's action, and the absence of other observable vital functions. Sometimes this state of syncope is attended with convulsive phenomena, and where the loss of blood has been very great it may end in death. But most generally reaction very readily takes place, and if properly guarded, is moderate enough. These being the effects of bleeding, it is obvious that there are many conditions in the course of diseases which it is calculated to overcome and to modify. And the questions,—when to bleed, and whom to bleed,—are the questions of practical importance to us.

The indications for the use of a remedy are numerous and various, and there is no particular symptom upon which we can rely as an infallible guide to the use of the lancet; but it is rather a combination of symptoms and conditions by which we are to be guided. The general indica-

tions for blood-letting, and the conditions which indicate the propriety of its use, are a full habit, a strong, full, and quick pulse, hot skin, flushed face, and inflammatory action going on in the system, and tending to disorganization. These symptoms occurring in a stout and previously healthy patient, free from all morbid taints of the system, either hereditary or acquired, call loudly for the use of the lancet and the practitioner can scarcely err if he bleeds under these circumstances, and he may greatly endanger the life of the patient if he neglects the timely use of this remedy.

But there are some cases which do not present these symptoms, yet still demand the use of the lancet. Sometimes inflammation attacks some interior organ, and instead of having such symptoms as usually indicate the use of the lancet, there is a small pulse, cool skin, and apparent prostration, and it is of the utmost importance that we be not deceived by this condition, and that we properly discriminate between this appearance of debility, and that of real debility. And this we may do by knowing that it has occurred in the commencement of the disease, and by a close scrutiny of all the symptoms presented. On the other hand bleeding would not, as a general rule, be admissible where there is an anemic condition, and a depressed state of the vital powers, a depraved condition of the blood, or where there is nervous irritation arising from direct depression of the nervous centres such as would be indicated by a small and feeble pulse, coolness of the skin, and paleness of the face. The ends which we may accomplish by blood-letting, are to lessen the amount of blood when it is too great, and to reduce its quality when it is abnormally rich or stimulant, and by so doing to relieve irritation and inflammation; and by lessening the heart's action to obviate local determinations, to relax spasms, and to relieve irritation by depressing the nervous centres; to arouse susceptibility in any organ rendered insensible by congestion of the nervous centres, and to promote absorption. Such are said to be the indications which bleeding is

calculated to fulfill. Congestion is a condition, that by the judicious use of the lancet, we may frequently relieve to a great extent; and by the assistance of other remedies, succeed in entirely removing. That congestion often exists where it would be imprudent to use the lancet, can not be denied; but when the remedy is admissible, we would expect good results, from the nature of congestion. To say of what congestion essentially consists, and to define the limits between it and inflammation, would be quite a difficult undertaking, as there exists great difference of opinion among pathologists on this subject. But I think we may safely say that congestion is an unnatural flow of blood to a part,—more blood being sent there than in health, and this overplus of blood becomes stagnated to a certain extent. Congestion is preceded by irritation, and its tendency is, if unchecked, to inflammation. In congestion there is an inequality of the circulating fluid; in one part there is more blood than exists in health; in other parts there is less. Now the effects of blood-letting are to reduce the quantity of blood in circulation, to lessen the heart's action. and its tendency is to equalize the circulation; and if we equalize the circulation we relieve the congestion. And by bleeding in congestion, the supervention of inflammation is prevented. In some of the active hemorrhages with which we meet, blood-letting is one of the best remedies,and by a full bleeding when a hemorrhage is threatened, we may often succeed in preventing its occurrence. Fevers do not demand the use of the lancet to control their own action; but when it is of a symptomatic character, and dependant upon a local inflammation, or when the febrile action is high, and there is a determination to some important organ, we may derive much benefit from blood-letting.

But it is to inflammation that blood-letting is peculiarly adapted, and in which, when properly practiced, it is productive of the happiest results. Still there are a great many cases of inflammation in which blood-letting would

views and opinions, and not to intrude upon the society any idea that might be peculiar to myself. Hoping that I have discharged my duty, and have furnished material for discussion, I close this essay, regretting that time has not been sufficient to enable me to present this subject in such a manner as it should be done.—*Jour. of Med. and Surg.*

On the Resorption of Pleuritic Exudations.

BY PROF. SKODA.

The resorption of pleuritic exudations frequently takes place very slowly, because the capillary vessels in the subplural connective tissue are obliterated. This may be the result of shrivelling and disappearance of the connective tissue newly formed from the exudation, as then, in consequence of the arrest of the metamorphosis of tissue between the blood and the exudation, endosmose and exosmose cannot duly take place. It is not until after the lapse of months or years, when the fluid portion of the exudation has penetrated through the false membranes investing the pleura, that its resoption occurs. In the first case, internal medicines can, of course, avail nothing, as in them we possess no means of exciting the reformation of vessels. What has been said explains the action of iodine injected in exudations, inasmuch as, by exciting inflammation, it causes the development of new vessels, and so induces the resorption of the effusion. But this view does not, perhaps, encourage us to the frequent employment of thoracentesis and subsequent injection of iodine; for this proceeding is by no means so safe as the corresponding operation for hydrocele. But, apart from that consideration, the injection of iodine or nitrate of silver into the pleural sac can answer no useful purpose; as, on the one hand, in consequence of the presence of the albuminous exudation, the

caustic influence of these agents cannot reach the pleural sac, particularly as by the chemical combination which these substances form with the effusion, their power is altered and exhausted, so that the fluid must in the first instance be pumped out, which violent and sudden evacuation may be attended with evil consequences. But, on the other hand, in effusions of long standing, which have already attained to partial organization and shrivelling of the product of inflammation, the injection will be inefficacious, because the lung can now no longer fill the space previously occupied by the fluid exudation, especially as the investing false membranes must first be broken up by the lungs, which is not conceivable. But even if this should take place, a sudden evacuation could be followed by no favorable result, because necessarily there must be ruptures of the pleuritic adhesions and bursting of the compressed pulmonary parenchyma. Therefore, in a pleuritic effusion of long standing, it is only exceptionally that puncture is admissible, when the exudation is so considerable as to depress the diaphragm, to displace the mediastinum, and so to compress the lung that danger of suffocation supervenes. But how can the resorption of pleuritic exudations be induced? Experience shows that all those means which lower the pressure of the blood or augment the secretions, and therefore promote the separation of water from the blood, effect a diminution of the fluid effusion. Accordingly, venesections and diuretics may be indicated in cases of effusion; but these effects also occur spontaneously. In chronic exudations, which are already organized, such means will even be rather injurious, and the indication will be to employ remedies capable of dissolving solid exudations. Such remedies are iodine and mercury. The cautious employment of these means may therefore be adopted, and they are particularly suitable for external application. Professor Skoda has for some years employed these means experimentally, and has often seen pleuritic exudations rapidly diminish after the use of mercurial oint-

ment, iodine ointments, iodide of glycerin, and black oxide of copper in the form of ointment. It is self-evident that in all chronic pleuritic effusions the diet must be good, in order as much as possible to counteract their injurious effects upon the system at large.—*Dublin Quart. Jour.* Aug. 1860.

Explosion of Fulminate of Mercury under Water.

By H. Kroeschell, Assistant Chemist at the University of Nashville.

A very small quantity of this explosive preparation, made for charging percussion caps, had, during the day, accumulated on the bottom of a sink lined with zinc, of which I was well aware, and wishing to remove the same (being mixed with sand and other refuse bodies), I proceeded to take up said mixture with a glass-plate. In scraping on the zinc and causing friction, a considerable explosion took place, throwing the muddy water all over my body and against the ceiling. Previous to this accident I had spent at least five minutes to cleanse said waste-trough by letting the hydrant run, so that at the time of the explosion there was at least one inch of water in the trough.

There is, according to my knowledge, no such accident on record, wherefore I think it proper to report this case, and to caution other operators: on the other hand this quality of Fulminate of Mercury may give rise to a more extensive use of it.—*Nashville Jour. of Med. and Surgery.*

Editorial.

We owe our readers an apology for the delay in getting out this number of the Journal. We have been regular and even punctual heretofore; but frequent and long absences from home, since the battle of Manassas Plains, in the discharge of official duties as the head of the Medical Department of our army, have prevented our getting to press earlier. And even now, we shall not be able to entertain our readers with reviews or editorials. There is not much to write about indeed excepting our army; and our readers will exclaim perhaps, 'you gave us enough of that in the last number.' Well, we do not know about that, if it had been of the right kind. At any rate, we do not think it possible to say too much of our army. Future ages will sing its praises, and record its sacrifices and deeds of daring as the heroic achievements of the age. Then it should be our special care and pride now, by every possible means in our power, to lessen its privations and sufferings.

North Carolina has done nobly in the provision she has made for her soldiers. The individual and associated efforts of her citizens have done much. There is no fashionable gaity or dissipation of any kind in her borders. Every nerve is touched, every exertion made, in behalf of the war. All feel that too much cannot be done for the brave men who have quit their homes and family altars, with all the quiet and happiness and plenty that reigned around, to risk their limbs and lives in defence of the liberties of our country, and of the security of our wives and children, amid discomforts and privations of which they had no previous knowledge or conception. We ourselves have seen the sick and suffering and dying soldier, away from home and friends, and in the lone tent, quietly

ment, iodine ointments, iodide of glycerin, and black oxide of copper in the form of ointment. It is self-evident that in all chronic pleuritic effusions the diet must be good, in order as much as possible to counteract their injurious effects upon the system at large.—*Dublin Quart. Jour.* Aug. 1860.

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yield up his life without a murmur of complaint, and almost with his last breath pray for the success of a cause in which he had suffered so much without the opportunity of striking one direct blow in its defence. This is true bravery, unsupported by the emulous spirit and confidence of numbers

> ——————"All the while
> Sonorous metal blowing martial sounds."

It is the deliberation of high patriotic purpose and conscious rectitude that is infinitely superior to the mere enthusiasm of excited courage. Thus it will be seen, that the shock of armies in the fierce conflict of men in battle array is not all of war. The thicket, the lone road side, the quiet tent, the march and bivouac over mountain top and plains and through valleys, tell another and a different tale. Then let us do all that we can for our soldiers. Money, individual exertion, associated effort are as nothing in comparison with the health and lives of our brave men. We must spend our money freely, and exert ourselves to the utmost to promote the comfort, insure the health and take care of the lives of our soldiers.

Subscribers.

If there is any one who has paid his subscription to the Journal for this year, whose name does not appear in the published list of this number he will confer a favor by informing the editors of it.

Announcement.

In consequence of the existing war between the governments of the Confederate States of America and the United States of America—the proximity of this point to the territorial line dividing the combatants—the possibility that

this vicinity may, in the course of the ensuing six or twelve months, become the theatre of hostile operations—the excited condition of the public mind generally, and especially among that class of the community yielding pupils to institutions of medical learning—the unfiitness for receiving instruction, either satisfactory or profitable, which necessarily results from this state of mind—the large number of the youth of the country who are already in the military service—the stringency everywhere prevailing in regard to pecuniary matters caused by the posture of affairs above described—and the fact that *four* of our corps of teachers are employed in professional positions connected with the army, the Faculty of Shelby Medical College have deemed it proper to announce that the Winter course of Lectures for 1861–2 will not be opened, and that this suspension of exercises will be continued until further notice.

John H. Callender, M. D., Prof, Therapeutics, etc.
Thomas L. Maddin, M. D., Prof. Surgery.
Danniel B. Cliffe, M. D., Prof. Anatomy.
J. J. Abernathy, M. D., Prof. Theory and Practice.
Daniel F. Wright, M. D., Prof. Physiology and Pathology.
Henri Erni, M. D., Prof. Chemistry.
John P. Ford, M. D., Prof. Obstetrics, ect., and Dean of Faculty.
H. M. Compton, M. D., Demonstrator of Anatomy.

Nashville, Aug. 22, 1861.

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SESSION OF 1861–'62.

THE NEXT ANNUAL COURSE OF LECTURES will commence on the first Monday in November, 1861, and continue until the first of March ensuing. This postponement of the period for opening the course is not intended as a permanent departure from the term of five months, which has been adopted and rigidly adhered to for several years past, but is a temporary result of the present disturbed condition of the country, which appears to justify and require some abbreviation of the ordinary collegiate term. The former term will be resumed with the restoration of peace and tranquility.

The improvements which were commenced last year, under the liberal appropriation made by the State Legislature, have been for the most part completed. The College building has been to a great degree renovated: Extensive additions have been made, at large expense, to the Chemical Apparatus, the Anatomical Museum, and the illustrations in every department: The new Hospital has been completed and furnished, and has been for some time in successful operation. The facilities for the prosecution of Practical Anatomy will be, as heretofore, ample.

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JAMES H. CONWAY, M. D. " *Obstetrics and Diseases of Women and Children.*
JAMES B. McCAW, M. D. " *Chemistry & Pharmacy.*
MARION HOWARD, M. D. " *Demonstrator of Anatomy.*

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For fuller information, or for a copy of the Catalogue and Announcement, address,

L. S. JOYNES, M. D., *Dean of the Faculty.*

Richmond, August 1, 1861. 5—2t

Dr Wm H. McKee

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OF

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S. S. SATCHWELL, M. D. } Editors,

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NORTH CAROLINA

MEDICAL JOURNAL.

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Original Communications.

A Reply to Dr. W. T. Howard's Reviw of the "Essay on Malarial Pneumonia," which appeared in the Transactions of the Medical Society of North Carolina.

BY OTIS FREDERIC MANSON, M. D. MEMBER OF THE MED. SOC. OF N C.

(*Continued.*)

THE DELIRIUM OF MALARIAL PNEUMONIA.

In addition to the grave array of symptoms, which we have noticed, as attending the career of the disease under discussion, we have lastly to consider—delirium.

In our essay, the following observations, with others, occur in relation to this symptom.

The presence of delirium, is more common in the malarial, than in the simple form. In the former, it is usually distinctly *intermittent* or *remittent*, in the *early stages*. At that period, it is also, usually mild in its character, the patient seeming to be in a state between sleep and awake, muttering incoherent and rapidly changing fancies, but when fully aroused, and his attention directed, replying in a rational manner. The delirium is evidently of a *neuralgic** character, being often associated with a cool skin and

*This as every intelligent reader will at once perceive was a typographical error and should have been *neurotic*.

feeble pulse, with no other symptom (i. e. besides the delirium) belonging to organic cerebral lesion, and like the hallucinations of delirium tremens, to which it bears many, and striking resemblances, is *relieved* by *sleep*, to *recur again* however, in the febrile *paroxysm*. Delirium, however, supervenes under other circumstances, which although we have already noticed, constitutes such an important feature, as will excuse a repetition. Often without any previous cerebral symptoms whatever, after the pneumonic symptoms have been mitigated or have entirely disappeared, and confident hopes are entertained of the patient's recovery, a furious delirium suddenly occurs. The reader will perceive, that we have here described delirium, as occurring in two distinct forms in the malarial disease.

1st. *Mild* delirium, of an *intermittent* or *remittent* type; presenting itself in the *early stages*, and

2nd. *Fierce* delirium occurring as a *fatal* symptom towards the *close* of the *disease*.

On these heads, our critic sums up his views in the following declaration: "We cannot admit that delirium either by the *frequency* of its occurrence, the *time* at which it occurs, or by *its character* offers *any special indication* of pneumonia imbued by the poison of *malaria*." We beg leave to subject this "most lame and impotent conclusion" to a brief examination.

1. Frequency of occurrence. The decision of our reviewer, that the frequent occurrence of delirium in Malarial Pneumonia possesses *no* diagnostic *value*, is based upon the fact which he cites, that "it occurs sufficiently often in the course of Simple Pneumonia, to be prominently noticed in the writings of many eminent observers," among whom he refers to Grissolle, Louis, Andral and MM. Hourmann and Dechambre. Let us examine these.

1. Grisolle, Louis, and Andral. As the views of these writers are all quoted from the work of the former, we will follow our reviewer for the sake of convenience. It is

true, as stated by him, that Grisolle states, that "in two hundred and ninety cases of pneumonia observed by him, twenty-seven presented delirium of more or less intensity at certain periods of the disease," but this by no means supports the view that delirium in simple uncomplicated pneumonia is a very common symptom; for after stating that "the habit of drunkenness, ought to be regarded as one of the most frequent causes which provoked delirium in the course of pulmonary inflammations." Grisolle adds, "that in *one third* of the cases of delirium of which he had spoken the patients were habituated to frequent excesses of wine or drank daily, great quantities of strong liquors, and especially of French brandy. Now if we deduct these cases which even our critic cannot contend were *simple cases*, we shall then have only eighteen cases presenting delirium in the enormous number of two hundred and ninety patients affected with pneumonia, certainly a very small proportion indeed, and which would not probably be less, in any acute febrile disease. If to these cases, we also add, those quoted by Grisolle from the works of Louis, Andral and Briquet, (twelve of the cases of the latter also being drunkards) we shall have four hundred and thirty-five cases of pneumonia, in which delirium occurred in only fifty-four drunkards included, and deducting the number of the latter, of which there were thirteen, we have in these four hundred and thirty-five cases, only forty-one cases, presenting delirium at any period of the disease, and three hundred and ninety-four cases presenting no symptom of mental disturbance at all. When we remember that these patients were affected with a grave disease, and that disease pneumonia, we must be surprised that the brain exhibited no disorder of function, in this overwhelming majority of cases.

2. *MM. Hourmann et Dechambre.* Astonished as we have been already, by our critic's strange exhibitions of erudition, we must confess to a greater degree of amazement, at his introduction of the old woman of Salpétrière, into a discussion concerning the relative frequency of de

lirium, in simple and malarial pneumonia. Differing widely, in its usual symptoms, signs,* course, duration and termination, from the pneumonias of persons of ordinary ages, the pneumonia of the aged, may be regarded as an unique disease. Presenting peculiarities never, or seldom witnessed, in the adult, its delirium if it can be so called, also presents phenomena, so entirely different, from those of the former, that it will only be necessary, to transcribe the description of MM. Hourmann and Dechambre, to show how little relevancy, it bears to the subject under discussion. To complete the *tableau special*, presented in the "*pneumonie chez les vieillards*," these authors state, "It rarely happens that pneumonia passes through its stages without disturbance of the intellectual faculties. This is commonly observed at the period of supuration, but often, the mental disorder becomes evident much earlier. This disturbance *may* consist in a *real* delirium, either transient or persistent, either active or passive, and usually increasing in intensisty towards the approach of night, *More often and this character is peculiar with the aged*, it is *not* a *perversion* but a simple *decay* of the cerebral faculties. There is *neither incoherence* in the words or *extravagance* in the *acts* of the patient, but they present a state of *remarkable hebetude.* They scarcely comprehend the most simple questions; the memory of the most recent events escapes them, and it is impossible to obtain an exact knowledge of their feelings. They remain *taciturn* and soil their beds *unconsciously.*"†

Such is the picture evidently drawn from nature of the mental condition in the pneumonias of the aged, decrepid actors in the—

* We are rather surprised that our critic should rocognize the cases as pneumonia as M. M. Hourmann and Dechambre state, that in the pneumonia of the aged that "le rale crepitant tel qu'el s'entend chez l'adulte est extremement rare."

† Recherches cliniques pour servir à l'histoire des maladies des vieillards; faites à la Salpétrièra Archives Genérales de Médecine, Tome xii. 164.

"——— ——— Last scene of all
That ends this strange eventful history,"

whose delirium, is "mere oblivion," and has but little more connection with the subject of this controversy, than the elderly inhabitant of the moon.

So much for the testimony gathered by our reviewer, from the monograph of M. Grisolle. Accepting the statistics presented, as being all cases of Simple Pneumonia, which we have reasons for doubting, delirium is not therein presented, more often, than we should reasonably expect, or indeed is really found, in most affections of an acute character, attended with active fever; and we therefore find, that the large majority of writers, place but little stress, upon the occurrence of delirium in simple pneumonia.

"*Rarement*, on observe du delire," says Nalleix.[1] "*Some cases*" Chomel[2] simply remarks "present insomnia and delirium."

"*Now* and *then*," Barlow[3] remarks "delirium occurs especially towards night."

Delirium coma and convulsions are rare "observes Walsh.[4]

"It is a rarer case for the head to suffer, Williams[5] declares, whilst if we accept the testimony of Swett,[6] a favorite and frequently cited authority of our reviewer's, delirium must indeed be an exceptional occurrence in the simple form. "In a primitive pneumonia" observes this writer, "although at the closing scene in fatal cases, the intellect may sink into coma and low delirium—yet as a *general rule*, the *intellectual powers* are *remarkably sustained*

[1] Guide du Médecin Practicien, i. 436.
[2] Dict: de Med. xxv. 171.
[3] Manual of the Practice of Medicine, Amer. Ed. 188.
[4] Diseases of the Lungs and Heart, 298.
[5] Cyclop. Pract. Med. iii. 610.
[6] Diseases of the Chest, 105.

in this disease. The *coolness* and *composure* which mark its progress, like the sanguine expectation of recovery which belongs to phthisis, is to me one of its most striking and pathognomonic features. This composure continues often until the close of life or until near this period, when a slight wandering of the intellect, or a tendency to coma may supervene, *as indeed, happens* in most diseases."

We therefore hold it to be proven, not only from the testimony adduced by us, but also from the authorities cited by our critic, that Delirium is neither a prominent or very frequent symptom in Simple Pneumonia.

Let us now turn to the malarial disease. If we adopt the opinion of our reviewer which he has prefixed as a text to his essay, that this disease, is "ordinary pneumonia, complicated by the impression of a malarial law," or the clearer statement of La Roche, endorsed by him, that it is a "*hybrid* disease—a union of two distinct and dissimilar affections, viz: Pneumonia and Malarial fever, then we must be forced to reject the conclusion of our reviewer, that "the frequent occurrence of delirium, "offers no indication of pneumonia imbued by the poison of malaria." As we have before remarked, when we turn to the pages of those who have illustrated the subject of Malarial fever, we cannot fail to be impressed by the vast number of observers, who have located its pathology, or its *point de depart*, in the nervous system of relation; the majority of whom, have been early led to adopt this view, from the observation of the phenomena prescribed during life. Among these phenomena, the frequent presence of delirium, has been almost universally noted, and we are at a loss to refer to a single high authority, who has treated the subject *ex professo*, who has not specially dwelt upon the disturbance of the intellectual functions, in Periodical fever. The pages

of Lancisi,[1] Ramazzini,[2] Morton,[3] Werlhof,[4] Torte,[5] Senac,[6] Cleghorn,[7] Sarcone,[8] De Haen,[9] Trnka,[10] Morgagni,[11] Lind,[12] Alibert,[13] Chomel,[14] Bailly,[15] Monfalcon,[16] Nepple,[17] Maillot,[18] Mongellaz,[19] Bonnet,[20] and Gintrac,[21] abound in chapters of cerebral accidents, such as coma, convulsions, apoplexy and delirium, and the frequent presence of these striking perturbations of the cerebro-spinal functions, obviously led Hoffmann,[22] Fodera,[23] Morton,[24] Quarin,[25]

[1] Opera Omnia (De Noxiis Paludum Effluviis) Romæ, 1715, Tome, i. 361.

[2] Opera Omnia Med. et Phys. (De abusu chinæ chinæ) Genevæ. 1717, 228.

[3] Opera omnia (Febris interment) Sugduni 1737, Tome i. Dissect; cit: p. 33.

[4] Opera Medico; Hannoveræ; chap. cclxxv; 54.

[5] Therepeutice specialis ad Febres periodicas perniciosas Leodii1 821, ii. 88, 246.

[6] De recondita Febrium Int: Amstelodami, 1759, cap. xx. 113.

[7] Observations on the epidemical diseases of Minorca, 3rd, ed. London, 1768, 159, 165, 1761, 218.

[8] Hist: raisonée des Maladees: obs: á Naples 1805, ii. 232.

[9] Ratioris Medendi. 1765. iii. 332,

[10] De. Feb. intermittent: Vendobonæ,1775, 141.

[11] De sedibus et causis morborum, 1779; iii. 16, 17,

[12] Diseases of Hot climates, London, 1808, 334—5 et passin.

[13] Des Fiévres (fievre pernic: int. delirante,) 46, Paris 1820.

[14] Des Fiévres, Paris 1821, p. 391.

[15] Traité des fievres intermittentes, Paris 18.5, p. 155 et passim.

[16] Historie Medicale Des Marais, Paris 1826, 290—5.

[17] Fievres int: et remitt, Paris 1828, pp. 68, 72–4–9, 81, 95, 112, 117,

[18] Traité des fievres, Paris 1836, pp. 27, 49, 52, 55, 60, 65, 69, 72, 75, 80, 82, 85, 89, 93, 98, etc.

[19] Monographie des Irritations Intermittentes, i. 295—318, Paris, 1839.

[20] Traite des Fievres int. Paris, 1853, 82—98.

[21] Pathologie Interne Paris, 1853. pp. 724, 730–8, 743.

[22] Opera Omnia Geneva, 1758, i. 305.

[23] Lecons sur les Epidemics, ii. 193. Paris, 1823.

[24] Op. cit. Febr. Int. 29.

[25] De Febribus et Infl. p. 155. Viennæ. 155.

Borelli,[26] Stoll,[27] Boerhave[28] and Van Swieten,[29] to consider Periodical fever as an affection of the nerves, or nervous fluid, and mainly induced Tode,[30] Hildenbrand,[31] J. P. Frank,[32] Rayer,[33] Guerin de Manners,[34] Maillot,[35] and Ford[36] and Campbell of our own country, to locate its seat in the cerebro-spinal axis.

Indeed, in ordinary attacks of malarial fever, of moderate severity, we believe that there exist but few instances in which more or less intellectual disturbance, does not occur at the acme of the exacerbation. In young persons, it is well known, that convulsions frequently usher in the paroxysms, and so frequently is delirium witnessed in all ages, that many of the French writers have devoted whole chapters to the special consideration of "*les fièvres pernicieuses délirantes.*" Well and truly observed Senac who is justly esteemed a classic authority on malarial fever, "*venenum febrile* ut jam innuimus, *mentis arcem solet aggredi*," and likewise Lancisi who remarks that the "noxious effluvia of marshes"—"per arterias carotides *evehendo. cerebrum*, ac *nervos* ita *irritant*, atque *implent* ut non modò *dolores*, ac *delirium*, sed *convulsiones* quoque, *soporem*, ac denique *apoplexiæ speciem* gignant." Yet in the face of facts like these concerning a class of diseases, in which functional disturbances of the brain are so common, that the most celebrated authorities in malarial fever, have been, as it were

[26] De Cognos et curaud, morb. 755.

[27] Aphorismes traduit par Mahon, p. 110.

[28] Van Swieten's comment (Edinb. transl. 1776) vol. 7, 203.

[29] Ibid et loc. cit.

[30] As quoted by Buiserius, (Inst. of Med.) W. Cullen Brown's trans 1, 127.

[31] Medicine Pratique tr. par Gauthier, ii. 219, 223.

[32] Medecine Pratique, tr. par Goudareau, i. 21.

[33] Dict. de Med. (en 25 vols.) tome xii, 343.

[34] Jour. des progres: des sci; Med. ii. 46.

[35] Traite des fievres, ed cit. pp. 138, 283, 236.

[36] Southern Med. and Surg. Journal, vol. i. p. 335, Nov. 1836.

[37] Report on the Nervous System in Febrile Diseases in the transactions of the American Medical Association, xi. 351 (in 1858.)

impelled, to locate its proximate cause in the cerebro-spinal centre, our critic declares that he "cannot admit that delirium by the *frequency of its occurrence* offers any special indication of pneumonia imbued by the *poison of malaria.*" According to this declaration, admitting the doctrine of our critic that Malarial Pneumonia is a conjunction of malarial fever and ordinary pneumonia, and that delirium is a frequent and prominent symptom of the latter, then we are forced to adopt the illogical and absurd conclusion, that when both of these diseases, each having a special tendency to pervert the cerebral functions, are united, that these functions would not be more apt to suffer, from the combination of causes, than from either, when acting singly and alone.

2. Character of the delirium. As we have before remarked, we have noticed delirium as presenting itself in two different forms, viz: Mild delirium, of an intermittent or remittent type, occurring in the early stages, and Fierce delirium, supervening towards the close of fatal cases, of the malarial disease.

On this point, our critic sums up in the following declaration: "We cannot admit, that delirium . . . . . by its *character* offers any special indication of pneumonia imbued by the poison of *malaria.* In order to reply clearly to this position, we will first consider, the mild intermittent or remittent delirium, as under that aspect, it is observed at that stage of the disease, in which it renders the most valuable assistance in the diagnosis. And first, let us revert again to the text of our critic's review—"What is Malarial Pneumonia? Is it a disease so distinct and different from ordinary pneumonia, as to be unlike in character and nature? Or is it almost always but the ordinary form, complicated by the impression of a malarial law?"

We will not underrate the intelligence of the reader, by an endeavour to prove that *periodicity* is the characteristic and conspicuous attribute, of all diseases claiming a malarial origin, and in all affections with which that element is

associated, that the character of *paroxysm*, especially pertains to this class of diseases, and that the fever, and all its consequences, and accompaniments are subject to regular periods, of increase, decline, remission or intermission. Nor does delirium, evince in a manner less evident, the operation of the subtle agency at work; having its regularly recurring periods, of appearance, increase, decline and cessation. These facts our critic in considering this symptom entirely disregards. So intently is he engaged in controverting our positions, that he forgets his own premises and abandons the principles which he himself at the inception so boldly promulgates. In the ardour of the contest, he nullifies his own "*malarial law;*" "*Inter arma silent leges;*" and lo! the imposing excuse he offers for thus trampling on his own tenets, hear him!

"Dr. Manson states that in malarial pneumonia the delirium is usually distinctly intermittent, or remittent in the early stages, and is usually mild in its character etc." But every one must have observed, that delirium is usually greater during the intensity of the fever and oftener at night, when only it may exist in all febrile affections in which it is a prominent symptom and in this sense may be said to be "intermittent or remittent," *just as it is*, when present during the paroxysmal exacerbations of the fever in "malarial pneumonia."

We feel sure that no intelligent observer of malarial disease, will yield a momentary adherence to these views. According to this statement, the delirium of continued fever, and other febrile diseases is attended with the same periodical variations as in Periodical fever *par excellence*, than which we need only say, that nothing could be more erroneous. According to these views, the exacrebations of malarlal fever, recur regularly *every night* "*just as it is*" in all other febrile diseases," than which nothing could be more utterly unfounded; for it is as certain on the contrary, that the exacerbations of periodical fever, recur according to the *type*, commence immediately after the termination

of the cold stage, and do not wait for the approach of night, "just as it is" in all febrile affections." Nor do we need any other authority to prove the error of our critics views than his own declarations. In his resumé written some two hundred pages, after the above he holds the following language, in relation to the symptoms "we must chiefly, rely upon as diagnostic." "In pneumonia impressed by a malarial influence the daily exacerbations of the fever, are in a great many instances accompanied by the *phenomena* that are *generally so prominent* in the *ordinary forms* of *periodic fever*, that is to say, besides the increased heat of skin, accelerated pulse and more urgent thirst, the febrile access is announced by returning headache, pains of more or less violence in the small of the back and the limbs, especially an aching in the legs and perhaps nausea. If these symptoms had subsided during the remission of the fever, or if they had merely abated without ceasing entirely, they now become more prominent and distressing and continue until the subsidence of the fever, when again they are less severe and disappear entirely," and again "In the absence of the chill it is by noticing a *marked display of periodicity*, a peculiar *acuteness* and *distinctness* in the *febrile phenomena* we have described, that the complicated character of the pneumonia may be most *certainly ascertained* and in proportion as they are *prominent* and easily recognized, is the diagnosis rendered sure and easy." Here certainly we may allow the discussion on this point to rest, although our reviewer does not include delirium among the "*febrile phenomena*" in the above extracts, yet as it has been seen that he has insisted on the "frequency of delirium" in "ordinary pneumonia" and holds this latter to be one of the parents of the hybrid disease, he cannot deny that this symptom, like the other "*febrile phenomena*," reflects the impress of the "malarial law," and such indeed is the fact. The periodical character of the delirium is just as distinct, as it needs must be, as any other phenomena in the paroxysms of periodical fever. Like the other febrile symptoms,

it is remitting or intermitting and more often of the latter type. It usually increases in violence *pari passu* with the febrile excitement, is most conspicuous at the height of the exacrebation, whenever this may occur, and does not necessarily occur at night,* unless that should happen to be the regular period, for the return of the paroxysm. We therefore adhere to our text. We have never penned anything more true, than our observations on this symptom; indeed they could not be otherwise, for they were made at the bedside. In the words of Maillot, "*Ce que j'ai vie, je la raconte.*"

The Final Fatal delirium. To close the discussion of the symptomatology of malarial pneumonia we have lastly to notice the strictures of our critic upon our observations concerning the peculiar delirium which often attends its closing scene. We reproduce the remarks on this point found in our essay, in addition to those already quoted; "A new symptom now sets in. The patient who before may have been entirely rational, or only slightly incoherent in sleep, or at the height of the exacerbation, suddenly becomes wildly and persistently delirious. The cough now often ceases, the patient often breathing apparently better than when in a more hopeful condition * * * * * The delirium increases in intensity, the patient growing almost uncontrollable and requiring force to keep him in bed and when not watched, rushing out of the house when nearly pulseless and cold. Quiet only succeeds to this raving, to be quickly succeeded by the curtain falling on this last scene of the agonizing drama."

In all this, however, our critic declares that there is nothing peculiar to or diagnostic of malarial pneumonia, as according to MM. Louis and Grisolle, delirium of every degree of intensity is also observed in the simple form. It is true that these writers both mention delirium of a mild

* In a case reported by us the delirium came on about noon every day. See Va. Med. Journal, 1859, page 92.

and furious character as occurring in the latter form, but they no where render any account of it having presented itself under the circumstances which we have recounted. In the cases from which our observations were drawn the patients would often seem to be suffering from a mild attack of the malarial disease without the presence of any symptom denoting danger. In some of them the pulse had been but little accelerated, the respiration almost normal, the head free from pain and the intellect previously clear. In fine, they were just such cases as we might reasonably promise ourselves, would soon terminate happily; but to whom, we would next be suddenly summoned, and find them in the state described. We have noticed that in this hopeless condition, the cough had almost or entirely ceased and the respiration was sometimes so free and easy, that an observer ignorant of the previous history of the case, would hardly suspect that the patient was a victim of pneumonia. Nor, in truth is it so. The patient dies precisely like those who die of Remittent fever. He dies from the action of the febrile poison on the brain. On a careful examination of one of these patients just before death, the chest was found to be resonant throughout and the natural respiratory murmur could be distinctly heard almost everywhere. The patient does not usually in such cases perish from the lesion of the lungs, but sinks under the perverted functions of the brain. Nor is this delirium symptomatic of the lung affection, for it may occur when the pectoral symptoms have been mitigated or have entirely disappeared.

The quotation from Cleghorn. As we had nowhere seen this sudden and unexpected termination of pneumonia in a fierce and fatal delirium so well described as by Cleghorn, we thought proper to introduce the following quotation: "Besides some *abatement* of the fever, which happened *every morning* it was remarked, that upon the third day or beginning of the fourth there was frequently a great *remission*, sometimes a *total cessation* of *every violent symptom*, so that the sick were *thought to be out of danger* but on the

fourth or fifth, a *delirium suddenly came on* or the breathing became more difficult then ever and one or both of these symptoms increasing hourly, the patient expired *either* suffocated *or raving mad*," etc.

Upon this brief extract, our critic has thought proper to bestow a lengthy and labored notice. He declares that he "cannot see the appositeness of the quotation or in what manner it strengthens his (our) cause," and that he "imagines that the symptomatology of few diseases has undergone changes so great, as those that distinguish the affection described by Cleghorn and Dr. Manson." In other words our reviewer would have the reader believe that we have committed an egregious blunder in citing the account which Cleghorn gives of the unexpected and fatal delirium and that this symptom as described by that writer occured in a disease entirely distinct and different from that forming the subject of our essay and therefore is entirely foreign to the matter in hand. It will only be necessary to quote the previous observations of Cleghorn on the "epidemic pleurisy of Minorca, to prove, that it is our critic who has blundered and not ourselves. We trust that we shall be excused for doing this, not only because of its connection with one of our most interesting endemic diseases, but also because it displays the changes which the malarial form of pneumonia has undergone, since the period at which it was written.

From his chapter, entitled "*Of the Pleurisy* and *other inflammatory Fevers frequent* in the *winter and spring months*," we make the following extracts: "The *anniversary epidemical fevers* in Minorca may be divided into two classes which at present for distinction's sake, we shall call the Summer and Winter Fevers—Both these classes of Fevers and indeed almost all others which happen in that climate whether primary or symptomatical diseases, may be termed *periodical*, having *remissions* at intervals more or less considerable: But those of the Summer, as has been already observed generally assume some one or other of the *tertian*

types, being worse one day and better the next alternately. Whereas the *winter fevers* though they often *counterfeit* tertians especially in their *beginning*, yet for the most part have *exacerbations* equally strong *every day*, coming on about noon, *with* or *without cold shiverings*, and terminating towards morning, sometimes with *gentle sweats*, sometimes without any sensible evacuation. * * * * As the generality of them (winter fevers) is called *Mal de costat* by the vulgar and the *Pleurisey* by physicians from their being accompanied with pains in the side. I have in *compliance* to *prevailing custom* retained that name in the title of this chapter, though it will appear in the sequel, that they ought rather to be termed *Peripneumonies*, agreeable to the observations of Lechius, Hoffman and others. These Pleurisies began commonly like an ague fit, with shivering and shaking, flying pains all over the body, *bilious vomitings* and *purgings*, which were soon succeeded by quick breathing, immoderate thirst, *inward heat*, *headache* and other feverish symptoms. In a few hours the respiration became more difficult and laborious, the most part of the sick being seized with stitches in their sides, striking upwards to the clavicle and shoulder-blade; obliquely downwards along the cartilages of the bastard ribs, or else darting across from the breast-bone to the vertebræ of the back so that they could neither cough, nor make a full respiration without great pain.

Many were drowsy and inclinable to sleep, but they *raved* at *intervals*, or were much disturbed with extravagant dreams. Some laughed in their sleep; others would awake in a fright and start out of the bed imaging that the house was in flames; that those about them were endeavoring to push them over a precipice; to pierce their sides with daggers; to bind them down with cords or iron hoops and things of the like nature.*

Here follows the quotation already cited.

*Diseases of Minorca, chapter vi, passim.

Such is the description given by Cleghorn. The reader who is not blinded by a critical furor, like our reviewer, will at once be impressed with the striking resemblance between the narrative of this writer and the sketch given by us. Prevailing in a locality where miasmatic fever was annually epidemic "from July to January," the attack ushered in by an ague and its course, marked by regular quotidian exacerbations, "coming on about noon, with or *without* cold shiverings; attended with thirst; inward heat, headache, bilious vomiting and purging, with delirium, remittent or intermittent, in the early stages, and with fierce delirium in the final scene, it presents a picture so graphically portrayed that the physician familiar with the subject must instantly recognize the likeness between it and the bilious or malarial pneumonia of our southern clime.

But our critic cannot "perceive the appositeness of the quotation. And Why? What is it that so completely obscures his vision? Why cannot he recognize the vital phenomena as clearly drawn as they possibly could be in a brief sketch and which are identical in many respects with those declared by him to be characteristic of "pneumonia complicated by the impression of a malarial law." Why forsooth because in the disease described by Cleghorn, the grade of the febrile reaction, as well as the examinations *post mortem* denoted "a vehemently inflammatory disease" instead of presenting the congestive character of the present day.

The reader will at once perceive that these objections are merely specious and indefensible. According to this view a disease altogether loses its identity when it varies in its grade. Admit the validity of these objections and the pneumonia of the present day is no longer entitled to the name of pneumonia because it does not present the same vigorous reaction and bear the heavy bleeding which it did, (as we are told,) some thirty or forty years ago. According to this view the sketch which Drake has given of Bilious or Malarial Pneumonitis is not a correct description of that disease because he declares that some of the *most dangerous*

cases are the *least inflammatory*," "that the condition of the lung is more *congestive* and the functional disturbance of the lungs results largely from *sanguineous engorgement* and *retarded transmission of blood* through the organ," yet our critic as we shall see has fully endorsed "his portraiture of the prominent features of the disease" and declared that "the able author fully appreciated the malarial complications of pneumonia." The same objections would equally apply to the Notes of Chapman's lecture on "Congestive Pneumonia" because it represents the affection as being attended with the "heaviest *congestions*," instead of "the vehemently inflammatory disease described by Cleghorn."

With these observations we close our reply to our critic's examination of our views in regard to the symptoms and rational diagnosis of Malarial Pneumonia. The correctness of our delineation as well as the strictures of our reviewer we cheerfully leave to the final judgment of the reader.

THE STANDARD AUTHORITIES ON MALARIAL PNEUMONIA.

We have stated in our essay, that the disease under discussion was "only cursorily and imperfectly noticed by any of the modern standard authorities." To this our reviewer replies that he is "*now prepared to inquire whether we are so poor and destitute of reliable information as our author alleges.*" In characterizing the notice which this disease has received from the standard authorities as *cursory and imperfect* we by no means desire to be considered as declaring that it had received no consideration or that no valuable information could be found in relation to it in their pages, nor can the sentence be justly construed as alleging that we are poor and *destitute* of reliable information in relation to it, as our reviewer interprets its meaning. We beg leave before proceeding further to offer a few explanatory remarks. When we regard this disease in all its bearings, its frequent epidemic prevalence,

the wide range of territory over which it prevails, and the fatality which attends its march, we should have reasonably expected that such an important disease, should have been minutely, accurately and perfectly studied. When we remember the declaration of Dr. Drake that it destroys more persons in the Southern states than all other diseases combined as well as the statements of others* in regard to its mortality amongst all classes of our people, we should reasonably suppose that a small volume might have been given to the subject, in which its history, pathological anatomy, etiology, symptoms, signs, march, terminations, complications, diagnosis and treatment should have been clearly and elaborately displayed. But such has not been the case; a page or two, and more often inded, a few lines are all that have been devoted to its consideration by authors, except by M. Grisolle a French writer, who as we shall prove in the proper place, having no practical knowledge of the subject, has disarranged the few scanty materials which others had supplied him. These facts are therefore sufficient to prove, that the notice of this disease by modern standard authorites have been mere sketches, in which the subject was necessarily treated in a brief and cursory

*"It is incident to nearly every climate and to every season. It is sometimes epidemic. As such it has several times appeared in the United States. In the year 1812 it spread over the country with an unexampled mortality."

"In epidemic instances 9 out 10 perish," Chapman (Benedict's comp.)

"Rush, Wistar and Dorsey died of it." Ibid—Jour. Med. and Phys. Sci. i. 181, Phila. 1820.

"Fatality extreme and sudden." Day. N. O. Journal, ii, 579.

"Destroys more negroes than all other maledies combined." Gibbes, Amer. Jour. Med. Sci. 4. 289.

"A large proportion of deaths among negroes may be traced to it.' Jones, N. O. Jour. 7. 179.

"Fatality most dreadful among the Indians, it sweeps them off by hundreds." Glison, Army Med. Report, 1839–'54, p. 276.

"More fatal than any other disease in negroes. Cartwright, N. O. J 7. 699

manner. That it has been imperfectly delineated, will be as easily established. We therefore proceed to examine the descriptions of these authors in the same order in which they are introduced by our reviewer.

1. *La Roche on Bilious or Malarial Pneumonia.* It is perhaps known to the reader that this author has written a voluminous work of 500 pages on the "supposed pathological and etiological connection between Pneumonia and autumnal fevers, including an enquiry into the existence and morbid agency of Malaria." The work is purely theoretical and was so intended. The writer does not even attempt a description of the disease and therefore cannot be considered an authority on the subject. We have perused this treatise with much care and great interest, and whilst we accord to the author his due award for his industry and ingenious handling of his materials, there are many portions of the work which are unsatisfactory and we are convinced that the tendency of the whole as far as it has any bearing on the treatment of this and other southern diseases must be mischievous. Dr. La Roche however, whilst he does not attempt the description of this affection, endorses and quotes the account of Eberle, which he declares "embodies all that need be said on the subject," and in which opinion he is sustained by our critic. We quote the description as given by the latter:

Elberle's description of *Bilious Pneumonia*:

"This variety of the disease occurs during the cold and variable seasons, in districts abounding in sources of miasmatic exhalations. It appears to be the result of the combined agency of *koinio-miasmata* and atmospheric vicissitudes. The initial symptoms of this modification of the disease differ very little from those which usually usher in an attack of ordinary bilious remittent fever. In some instances, a sense of fullness and tension is experienced in the right hypochondrium, a few days previous to the supervention of the disease, and occasionally dysenteric symptoms occur before the fever commences. In almost all cases, considerable pain is felt in the back and extremities during the premonitory period. The skin from the beginning is more or less tinged with bile, and the conjunctiva, especially is often conspicuously icterode. The face is flushed

'and a sickly mixture of red and yellow, upon a close examination betrays the existence of a disturbed state of the liver' (Potter.) Acute pain in the forehead is almost constantly present. The pain in the chest is sometimes extremely severe and pungent; but more commonly it is obtuse and attended with a sense of weight of oppression in the breast. In some cases, the fever continues for several days before the pectoral pain supervenes. The expectoration is not very copious, the sputa being of a frothy yellowish appearance, marked frequently with streaks of blood. The fever is generally attended with *manifest evening exacerbations and morning remissions;* when vomiting takes place, an *occurrence very common in this affection,* more or less of *bilious matter* is generally thrown up, although, in some instances, the secretion of bile appears to be entirely suspended; the ejections consisting of nothing else than gastric mucus and the injesta. The tongue is at first white, with a yellowish streak along the middle, which as the disease advances, becomes dark brown and dry. The urine is always of a deep yellow or bilious color and the pulse is generally small, frequent, and quick, with a sligh degree of preternatural tension."

My old text-book at college! With feelings akin to Hamlet's when over the fleshless skull of his old palymate he exclaims with a sigh, "Alas! poor Yorrick! do I turn again to thee, the almost forgotten companion of my early days. Thy pages soiled and worn remind us how often by the midnight lamp we have bent over them in the firm faith that they would be a sure and faithful guide in the future, so that now, it seems almost like sacrilege to anatomize thee my ancient mentor. Truth, however, united to the more exacting calls of the most rigid of critics compels us to the task. We must obey. In the first place we must object to the predominant bilious hue which overspreads the portrait drawn by our old preceptor. Besides the sense of fullness in the hypogastrium which we never could get our patients to admit, he says that "the skin and conjunctiva from the *beginning* are tinged with bile." This we know is a mistake, it is only in the latter stages that these symptoms of jaundice appear and in a vast majority of cases they are altogether absent. Nor is "the pain in the chest commonly obtuse," but on the other hand the sharp stabbing pain, the *point de côte* is almost

universally present. Nor is our old friend more correct in saying that "the expectoration is usually of a frothy *yellowish* appearance, marked with streaks of blood," for the sputa are usually of a bloody hue. Nor do we often observe the "yellowish streak on the middle of the tongue early in the disease." Nor is the "urine always of a deep yellow or bilious color. On the contrary, it is of a deep red color. Nor is the pulse usually small, nor is any degree of "preternatural *tension*" its "*habitual* character."

It will be seen therefore that the only symptoms laid down in the above description which can be said to be *generally* present are "the acute pain in the forehead," the cough and the manifest evening exacerbations and morning remissions. Not one word is said about the cold stage as it is present in the grave or mild cases and which we hold to be almost universally present. The great prominence which Eberle gives to the bilious symptoms caused me often to fail in diagnosis in my early career. In the gravest cases they may be entirely absent and with the *exception* of the *bilious vomiting* which is the most common of the bilious symptoms, they are never present in the early stages of the disease, according to my experience. The distressing, persisting nausea admitted by our reviewer to be a characteristic, and which may or may not be attended by vomiting, is not mentioned by Eberle. We further call attention to the fact that Eberle declares in his recountal of its symptoms that simple pneumonia is accompanied with an *obtuse* pain, a notion which has been long ago exploded. In three hundred and ten cases observed by Grisolle the acute pleuritic pain was absent in only twenty-nine. If we turn to the treatment laid down by Eberle he is still more at fault. After dwelling approvingly on the employment of Bloodletting and free doses of tartar emetic (a practice condemned by every prudent practitioner in the Southern States at present, as well as by our critic himself) he only advises emetics in the bilious form, quoting Stoll in their favor whose pneumonia,

according to Chomel and Andral was merely catarrh with gastric derangement. Eberle is perfectly silent on the employment of bark or quinine in this disease, although he declares it to be the "result of *koino miasmata* and atmospheric vicissitudes." From the perusal of his chapter therefore, the young practitioner would shun the administration of quinine in this disease, now regarded as the principal and indispensable remedy by all skilful practitioners, and without which there is neither security or safety. Surely then the candid reader must admit that we have not underrated the chapter of Eberle in the declaration we have made, that this disease "is only cursorily and imperfectly noticed by any of the modern standard authorities." If our reviewer had been as candid as he is critical, he would have noticed the worse than worthless remarks of Eberle on the Treatment of Bilious Pneumonia. Give this work to the young practitioner without any other guide and we verily believe that he would not only fail in his diagnosis, but that he would soon lose half of his patients and all of his practice. The absurdity of the declaration of La Roche that this miserable caricature of a southern disease as drawn by Eberle, "embodies all that need be said on the subject," is only equalled by the literary toadyism displayed by our critic in endorsing it. La Roche indeed stultifies himself in asserting that Eberle could dispose completely and conclusively of a disease in a few lines, when he himself has consumed hundreds of pages in discussing its *etiology* alone.

Wood's description of *Bilious Pneumonia*:

"By far the most *frequent form of Bilious Pneumonia* is that which occurs as an associate of *remittent or intermittent miasmatic fevers*. This is a very *common disease* in the miasmatic regions of the United States; and is especially prevalent in the cold seasons, in the low lying parts of the western and southern sections of our country. The pneumonia may either be secondary, making its appearance after the fever has set in, or it may be primary, and, by the disturbance which it excites in the system, call the pre-existing tendencies of the miasmatic fever into action. It

occurs usually in the latter part of the autumn, in the winter, or in the early spring months, and appears to be caused by *vicissitudes of the weather*, acting on a predisposition acquired by exposure to malarious influences during the summer and early fall. It is most frequent and fatal in *seasons* which follow an *unusual prevalence of bilious fever*. It is very *common* among the blacks and colored population of the South. The name by which this complicated disease is perhaps most generally known in our country, is, *bilious pleurisy*. From the frequency of *acute pain* at the commencement, there can be no doubt that, as in ordinary pneumonia, the disease of the lung is often attended with *inflammation of the pleura;* and it is possible that, in some instances, the inflammation may be confined chiefly to that membrane; but generally the lungs are most deeply involved, as shown by the bloody expectoration, the physical signs during life, and the result of post-mortem examination.

The pectoral symptoms and physical signs do not materially differ, in this form of pneumonia, from those already described as characteristic of the uncomplicated disease. It is not necessary, therefore, to repeat them. The peculiarities are those derived from *the* miasmatic complication. In those cases in which the *fever is the primary affection*, the chill and febrile symptoms generally precede those proper to the pneumonia for one, two or three days, and sometimes a longer period. In other instances, the pneumonia and bilious symptoms pursue an even march. When the complicated disease is established, we have usually, besides the signs of pulmonary inflammation, more or less of the following symptoms. viz., headache, a yellowish, or yellowish white fur on the tongue, nausea and vomiting sometimes of bile and sometimes of the ordinary gastric fluids, a more or less yellowish tinge of the skin and conjunctiva, often a brownish color of the face arising from the mixture of the pneumonic redness with the icterode hue, and a deep colored, yellowish brown urine. The fever is always *remittent* generally with *daily paroxysms*, which, however, are often more severe on the alternate days; and occasionally the remission is so considerable, that the disease apears almost in the form of a quotidian or tertian intermittent. In the latter cases we may consider any existing fever in the intervals as sustained by the pulmonary inflammation. The *grade of inflammatory action is* in general *less elevated* than in ordinary pneumonia, and sometimes the fever assumes a *typhoid character*, the pulse becoming feeble, tongue brown and dry, and the mind often somewhat *wandering*. The cases of intermittent pneumonia, spoken of by writers, probably belonged to this variety of the disease. Under proper treatment, bilious pneumonia generally terminates *favorably*; though it may prove exceedingly fatal, when associated, as it sometimes is, with the more malignant forms of miasmatic fever."

The objections which we have to urge against Wood's description of this disease are :

1st. The undue prominence which with Eberle he has given to the bilious symptoms. Indeed it would seem that he had closely copied these symptoms from the account given by that writer. We have no hesitation in saying that these features are entirely overdrawn and that his canvas is so bedaubed with colors of flowing yellow as to render the likeness in the majority of cases unrecognizable. If the diagnosis as taught by this sketch is principally to be based on the bilious symptoms, the practitioner will often find at the bedside that he is deprived of these guides, and on the other hand, guided by these symptoms of jaundice, as represented by Wood to be peculiarly diagnostic of the malarial disease, he would often mistake the simple form for the former, as according to Grisolle our critic's "greatest authority," "with the exception of yellow fever, there is no acute disease in which a jaundiced hue of the skin and sclerotica are so often observed as in simple pneumonia."* Nor is the "fever *always* remittent" as stated by Dr. Wood, and if it were, it would not according to *his own declarations* be diagnostic, as he states, that in Simple pneumonia also "the fever often has a *remittent* character, the *exacerbations* occurring daily for the most part towards evening and accompanied with increase of pain, cough dyspnœa and bloody expectoration." If a practitioner indoctrinated with these views were called to a case of Malarial pneumonia in which the bilious symptoms were absent he would inevitably consider it as belonging to the simple form, or if viewing a case of the simple form with icteroid symptoms he would as surely consider it a malarial disease. In such straits would the "American practitioner" in all probability be placed if guided by this work which our critic with obsequeous servility terms his "Prayer Book."

* Traité de la pneumonie, 382.

3. The cold stage is not mentioned by Wood. We regard this as the pathognomonic symptom of Malarial pneumonia. Nor does this author notice the congestive character of the disease as distinguishing it from the simple form.

4. Dr. Wood's section on the "Treatment," we regard as open to many and serious objections. We have nothing to say in regard to his remarks upon bloodletting save that we think from their general tenor that the young practitioner would be led to employ it too often. It is only in rare and exceptional cases that the lancet is required or that it can be used with safety at all. We protest against the opinion of Dr. Wood that "in *general* the loss of twelve or fifteen ounces at the commencement is advantageous," in which our critic must unite with us as he has advanced opinions equally as heretical against the doctrines of his "prayer book."* Nor do we agree that it is a safe or commendable practice to prescribe after this an emeto-cathartic of tartar emetic followed by a purgative dose of calomel, a practice as we have seen also condemned by our critic who declares that "there is something peculiarly irritating in the association of these two articles" but who very unreasonably contends that "the calomel contributes most to the deleterious influence in question."†

*We refer to our critic's statement that "everywhere the prevailing medical constitution of the times" is asthenic and to his observations in the following note. See April No. of this Journal, 1859, p. 409.

"During a sojourn of some weeks at the Virginia Springs during the past summer, we conversed with physicians from different portions of the country in regard to bleeding in inflammatory diseases, and especially in pneumonia, and did not meet with one who had not been obliged to discard the lancet altogether in the vast majority of cases, or to use it very sparingly in those instances admitting of its employment at all. Even among those living in the mountains, such was the experience of all with whom we had any conversation. There never was a greater change in the therapeutics of inflammatory affections than the past few years have evinced.

†N. C. Medical Journal, March, 1860, p. 242.

5. We differ radically with Dr. Wood in regard to his views concerning the properties and employment of quinine. In the first place, we strenuously object to the advice given by that author of waiting for "a *decided remission.*" The practice of postponing the use of quinine until a "*decided remission*" occurs, we need hardly say at this day to the southern physician is a hazardous and unnecessary delay. It is very natural however, that Dr. Wood should inculcate such a procrastination, it being the necessary consequence of his views in regard to "the *stimulant action of quinia,*" incidentally mentioned in this chapter, but more fully in another work,* in which he teaches that the sedative effects of a large single dose, are merely the ordinary result of *over stimulation,*" and that it is altogether *supererogatory to imagine* the existence of a *directly depressing power* in the medicine." Nor can our critic dissent from these objections to the views of Dr. Wood on the most important part of the subject, for he himself has declared in the most emphatic manner that they are erroneous and obsolete. We have only space to refer to the following remarks of our critic on this head: "It is very true, that for a long time very *erroneous ideas* were generally entertained in respect to the use of quinine in fevers and inflammations under the belief that if either of these states were well marked, it was contraindicated and calculated to do no inconsiderable mischief; but these *therapeutical dicta* were already rapidly passing away when we first entered upon

*These are Dr. Wood's views as enunciated at length is his "Treatise on Therapeutics and Pharmacology." He adds, "the stimulation of an organ first excites its function; if it be continued and increased, the function becomes disturbed and irregular; if still further increased, the organ is overwhelmed by the conjestion induced and its function is impaired or suppressed, the first excitement is thus followed by depression, through another physiological law which determines that the excitability of a part is exhausted by over exercise. Thus after the first excitant effects of quinine above referred to, have continued a short time, the cerebral centres become incapacitated for their duties through their congestion and secondary exhaustion." Vol. i, 243.

our medical studies and we were not educated under the *thraldom* of *such opinions.* In the first work on the Practice of Medicine that we read, the doctrine is taught that quinine is a *sedative;* and that when we are desirous of making an impression at all decided, in allaying the febrile disturbance of the functions generally, five grains repeated at intervals of two hours is the smallest dose which we should think of prescribing for an adult. And in that work it may be seen that Bailly himself took a hundred grains of the sulphate of quinine in five days for a slight febrile disorder when he was in Rome (1822) without being able to detect any irritation after an attentive analysis of his own feelings, which this quantity of medicine, says he would certainly have produced *if it* had been of an irritating or stimulating nature."*

It has been a source of regret to us for many years, that a teacher occupying the influential position of Dr. Wood, should have continued to teach such erroneous doctrines and especially as a large portion of his readers and audiences were southern men. Many a patient have we known to be lost whilst the attendant was "waiting for a remission." If a remission is desired, there is no means known so certain to produce it, as quinine, and we can never wait with entire safety for the occurrence of another paroxysm for as M. Maillot truly observes, "Il est empossible aussi de dire au début d'une fièvre intermittente, si elle sera au non pernicieuse. Another day should never dawn upon a patient laboring under any form of malarial disease, unprotected by quinine, from the perils of the approaching paroxysm.

Our critic continues; "We have seen already, that the philosophic and lamented Drake has noticed this modification of pneumonia in that great work which he bequeathed as a dying legacy to the profession he so loved and adorned.

*Dr. Howard's Review, N. C. Med. Journal, March, 1860, p. 259.

Our reviewer also endorses, in extravagant terms of approval, the work of Briquet, whose whole work proves quinine to be a sedative. See same No. Journal, p. 271.

It will not be expected that we should introduce here the entire section he devotes to its consideration; but we must make space for his portraiture of the prominent features of the disease.

Drake's description of *Bilious Pneumonitis*—

'In reaching a diagnosis of this malady, it is not necessary to travel through the symptomatology of either autumnal fever or pneumonic inflammation, but simply to refer to some modifications of both.

1. The signs of an intense phlogistic action are less conspicuous than in ordinary pneumonitis. The functional disturbance of the lungs may be quite as great as in the most acute inflammation, but it results largely from sanguineous engorgement, and retarded transmission of blood through the organ.

2. The fever, instead of the continued type of the pulmonary phlegmasia occurring in those who have not received a malarial or autumnal fever impress, is subject to remissions, even when most intense, while in numerous instances, it displays perfect quotidian and sometimes tertian intermissions. The pulmonary affection follows the same law, when it consists in well developed inflammation, that condition does not, it is true, cease with the periodical abatement or cessation of the fever, but is greatly moderated to undergo revival with the fever; but when the inflammation is less intense, and the pulmonary lesion consists chiefly in passive congestion, it may so far disappear in the more or less perfect apyrexia, that the term intermittent becomes almost as applicable to the local as the constitutional affection.

3. Such is the derangement of the biliary function in autumnal fever, whether the attack be original or occurring as a relapse, that in a large proportion of the cases now in our contemplation, bilious symptoms are decidedly present. In some the secretion of healthy bile is excessive; the fur on the tongue assumes a dirty yellowish tint, there is a bitter taste in the secretions of the mouth, vomiting and purging of bile occur, and now and then eructations of that fluid. Its presence is also manifested in the urine, the serum of the drawn blood, the white of the eyes, the skin, and as I believe, but not on conclusive evidence, in the sputa from the bronchial tubes. In other cases the signs of a bilious deterioration of the blood are present, but there is no excretion of bile from the liver, which seems torpid, and by not pouring its bitter and alkaline fluid into the bowels permits the occurrence of an exhausting diarrhœa, the discharges being watery, and so acrid as to excoriate the sphincter. * * * Some of the most dangerous cases are the least inflammatory and most intermittent, presenting, in their phenomena and mode of termination, a great resemblance to malignant intermittents. Those in which the fever most affects a continuous type and the pulmonary affection is the most

decidedly inflammatory, are in general the least dangerous, because most amenable to treatment.'

'The reader will be amply repaid by perusing the whole section from which we have made the above extract; but enough has been quoted to show, in the clearest manner, that the able author fully appreciated the malarial complications of pneumonia, and the modifications thus impressed upon it; and that his notice of the subject cannot be justly deemed either "cursory" or very 'imperfect'"

We are sure that no one but our critic, whose boldness would be considered heroic, if displayed in a worthier cause, would ever have termed the above mere outline a *comprehensive or perfect* account of one of the most important endemics of the Southern States, especially after having assumed positions diametrically opposed to the description here so warmly applauded. Let us examine it a moment. The reader at once will perceive that Dr. Drake has scarcely attempted a description of the disease, indeed he almost waives it, and refers the reader to his chapters on pneumonia and autumnal fever, in order that he may form for himself a proper conception of the malady; which we need only say would be no easy task. Nor would it be possible to do so according to Dr. Drake's own showing as a few words will suffice to prove. According to this author's views, "*the pulmonary* lesion" in the *malarial disease* "often consists chiefly in *passive congestion*" "the *most dangerous* cases being the *least inflammatory*." Now as this condition is altogether different from that existing in simple pneumonia, in which the *pulmonary lesion* consist in *acute inflammation* and in which the *most dangerous cases* are the *most inflammatory*, "a diagnosis of the malarial form could not be "reached" to use his own phrase, even were we "to travel through the symptomatology of autumnal fever and pulmonic *inflammation*."

2. The author states that in the malarial disease "the

signs of an intense phlogistic action are less conspicuous than in ordinary pneumonitis and that although the functional disturbance of the lungs may be quite as great *as* in the most acute inflammation, this results largely from *sanguineous engorgement* and *retarded transmission of blood* through the organ." Whilst we agree with the author in every point in this paragraph, yet the reader will agree with us that in order to form a correct history of the disease it would be necessary that he should have informed us in what these "signs" consisted. We should have been enlightened in regard to the character and conditions of the pulse, the state of the nervous system and the calorifacient function. Yet these are not even attempted. In these important respects the reader will at once perceive, that the views of the author however correct as far as they go, yet are so very briefly and rapidly stated, as to render them necessarily "cursory and imperfect." But that our critic should have quoted this paragraph (2) with approbation is "passing strange" for the ostensible object of his whole review, is to prove, the very reverse of the views it contains. According to Dr. Drake, "the functional disturbance of the lungs" in the malarial disease "results largely from sanguineous engorgement and retarded transmission of blood through the organ;" whilst agreeably to our critic, the condition of the lung is that of acute inflammation or to use his own words, is "*ordinary* pneumonia;" "*true* pneumonia," complicated by the impression of a malarial law."

3. Whilst we entirely agree with Dr. Drake, that "the fever in the malarial disease, instead of the continued type of the pulmonary phlegmasia, occurring in those who have not received an autumnal fever impress, is subject to *remissions*" yet we do not concur with him that it is always so. The remissions as we have stated are sometimes "obscure" especially when the fever is "intense." This is the case as the reader is well aware in ordinary remittent fever; the phrase "waiting for a remission" originated from the

fact. Indeed the continued type of malarial fever is noticed by ancient as well as modern writers.*

We are surprised that our critic should have quoted this paragraph, as we have already seen him contending, that "in Simple Pneumonia the fever is often *decidedly remittent* and *paroxysmal*" in direct antagonism to the declaration of Drake therein, that "the fever of the *pulmonary phlegmasia* occurring in those who have *not* received a malarial impress is of a *continued* type."

3. In relation to the frequent occurrence of some of the bilious symptoms, and especially the bilious vomiting, in the malarial disease, our experience coincides with that of Drake; but as we have said before, the symptoms of icterus are rarely seen save at an advanced period or at the close of the disease. Dr. Drake indeed admits, that "the phrase Bilious Pneumonitis does not always indicate a disease attended with bilious symptoms," and that "so far its employment involves a solecism," but we do not think they are so "decidedly present" in a large proportion of cases as he states.

Our critic again forgets himself, either in quoting, or praising the remainder of this paragraph (3) which contains as we have seen, statements in accordance with our own but warmly contested by him. According to Drake *diarrhœa* is a very frequent symptom induced by the malarial impress on the disease, occurring both when "the secretion of healthy bile is excessive" and also "when there is no excretion of bile from the liver," yet we have seen that our critic has most dogmatically declared that "there is no reason *known to him*, why a *malarial influence* should necessarily *impart* to *pneumonia* unwonted *irritability* of the *bowels*

* Celsus De Medecina, Ed. Rotteradame, 1750, 117.
Galen (Darenburg's French translation,) ii. 715.
Sydenham (Rush's ed.) Phila. 1809, p. 205:
Boerhave, Van Swieten's comment, ed. cit. 7, 174.
Montgellaz, ii. 18, who quotes Avicenna and Sennertius Torti Morton Senac Trnka and Maillot thereon.

or engraft upon it a state of phlogosis of the intestinal mucous membrane, and that to *assume* that the *state of the bowels* is owing to the *action* of *that element* in the *absence* of any *demonstrable proof* of its existence is simply to *beg the question.*"

It is thus seen from these extracts, which are really all that Drake has in relation to its symptoms and diagnosis that our critic not only has here approved opinions concerning the pathology of the disease, which in another place he has entirely condemned, but that he also differs with Drake in essential points in relation to its symptoms and diagnosis. Yet he concludes by endorsing the description without reservation and declares that the able author fully appreciated the malarial complication of pneumonia and that his notice of the subject cannot be *justly* deemed either "cursory" or very imperfect." We cannot close our examination of the chapter of Drake without admitting that as a whole it is by far the best contained in any "standard authority." As such we shall hereafter quote it, finding in it, as we shall, the strongest support for some of our views and which are in direct conflict with those held by our reviewer. We have now examined the sketches of this disease, as given by Eberle, Wood and Drake. As the reader has perceived they are brief notices, occupying but a few lines, in which the prominent symptoms are only recounted, as is usual in works on general practice. Not one of them contains an analysis of the symptoms, an account of its various grades, or of its character, when attacking different ages or sexes, nor a single exhibit of the appearances after death, the importance of which is so strongly insisted upon by our reviewer.

Surely then from these considerations as well as from those which we have shown whilst examining each individually we can say without disparagement or *injustice* that as histories of disease they are both "cursory and imperfect."

To conclude the examination of the "*modern standard*

authorities," whom our reviewer holds, have lucidly and comprehensibly delineated the subject of Bilious or Malarial Pneumonia we finally arrive at the account of M. Grisolle.*

The celebrated monograph of M. Grisolle since its first appearance, has been considered the most complete treatise ever published on the subject of pneumonia in general. The work occupies 747 pages 8 vo. and is evidently the result of vast labor and extensive research. The first eight chapters, embracing 397 pages, are mainly devoted to the investigation of the Simple or Frank form, exhibiting the disease as it occurs in subjects of different ages, and in its relations with other acute and chronic diseases. With the ninth chapter the author proceeds to notice the varieties of the affection under the title of "*Formes de la Pneumonie,*" devoting a separate section to the consideration of each. Finally, we may remark that the work has never been rendered into our language, and that its only edition which was published in Paris, 20 years ago (1841) has long been exhausted. With this explanatory preface we proceed to the discussion of this author's views of the subject of this controversy, by quoting the introductory remarks and comments of our reviewer, and by copying the description of the disease as given by the latter himself:

Dr. Howard proceeds:—"Lastly, we must introduce the greatest of all "*modern standard authorities*" on the subject of pneumonia. In his great work, *so often referred to in this paper, M. Grisolle* has given under the caption, *pneumonie intermittente et remittente,* nine pages to the elucidation of the *disease in question.* He alludes to various authors both ancient and modern, who have written on the connection of pneumonia with periodic fever; and notices the affection as appearing under the two divisions just mentioned.

Grisolle's account of *Intermittent Pneumonia.*"—

*Traité pratique de la Pneumonie, aux différens ages par A. Grisolle D. M. P. Paris, 1841.

1. "As is the case with most unpleasant complications, pneumonia is sometimes only developed *after* one or several paroxysms of simple, benign intermittent fever; but this is quite rare. In the greatest number of cases, there are to be seen from the first, some thoracic symptoms, and especially a pleuritic pain, which should fix the attention; but the disease is not entirely characterized until during the succeeding exacerbations. At other times the pneumonia commences as though it were simple, and it is only as it progresses that the specific cause, which produces it, or complicates it, can be recognized.

"The disease commences with a chill, which is more or less violent, during which the patient complains of pain of the side; soon there is cough and bloody expectoration, and the examination of the chest reveals fine crepitation; finally, after a variable length of time, the fever declines, the thoracic signs diminish in the same proportion, and last of all there is abundant diaphoresis. The intermission may be complete, that is to say, the fever, together with the greater part of the local symptom ceases; this is generally the case after the first or second paroxysm. At other times, during the intermission, some symptoms such as slight cough, a feeling of oppression or dull pain, a small amount of crepitation or dullness, continues to exist. In general the fever is of quotidian or tertian type; in the majority of cases, after a remission of *twelve or twenty-four hours*, a new paroxysm, longer and more severe than the first, appears and as the paroxysms increase in frequency, so do the intermissions become shorter and less complete.

"The local symptoms of pneumonia may disappear during the intermission, and reappear with the succeeding paroxysm; but in these cases the disease had hardly passed the first stage; crepitation was the only sign furnished by auscultation; but it is almost certain that if the paroxysms come on for several days in succession, the pneumonia passing from the first to the second stage, would make continued progress, and only manifest an exacerbation at the hours at which the febrile intermittent paroxysms had previously appeared. It is a fact, moreover, rare and purely exceptional, that pneumonia even at the first stage, *can completely disappear at the termination of the paroxysm;* that cessation of inflammation which is observed in some membranous tissues, seems far more difficult in the case of parenchymatous organs and especially of the lungs. Thus, then, when the first stage is well established, when the crepitant rale exists, the pulmonary lesion cannot be resolved in the few instants during which the *apyrexia lasts;* but it persists, it *even makes progress*, and becomes of *itself* the exciting cause of *a* continuous febrile movement.

"In consulting the report of periodical pneumonias contained in the annals of science, we will be convinced that the febrile exacerbations are almost *never* separated by a complete *intermission*; there exists on the

contrary a continued febrile movement in part symptomatic of the visceral inflammation, which augments at the time when the periodic exacerbations are renewed; pneumonia is then said to be *remittent.*

2. "*Remittent* pneumonia is rather a *rare* affection, and is hardly ever seen *except* in *marshy districts* of country and under the influence of causes which ordinarily produce *ague and fever*; it can then be observed as *an epidemic.* In general, the disease commences with the ordinary symptoms of open frank pneumonia. The patients have a violent chill, soon followed by burning heat, cephalalgia, and a pain more or less severe in one of the sides of the chest. These symptoms are accompanied at the same time by oppression, dyspnœa, and cough; the expectorated matter exhibits often during the first hours a yellowish or rusty tint, and the examination of the chest by auscultation and percussion, permits us to discover and *circumscribe* the pneumonia. The febrile movement once established, continues without interruption, but it undergoes from time to time, at variable but regular intervals, *exacerbations* and *remissions.*

"The exacerbations are generally announced by *slight shiverings*, which are generally *partial*, and which are altogether *absent* in a *great many cases.* Soon, the general and local symptoms increase in intensity; the pulse becomes more frequent, the heat of skin increases, the countenance becomes injected, respiration is accelerated and more painful; anxiety, dyspnœa, and pain of the side augment; there is at the same time a great deal of agitation, and it is not rare to see delirium now supervene. *The chest has rarely been explored during the existence of these phenomena;* but it is evident that, at this period, very active disease is going on in the lungs, M. Grifoulière, for example, has assured himself that, in these cases, a considerable portion of the lung has become completely hepatized in the course of *ten or twelve hours.* The exacerbations can be of a much graver character, and then be accompanied by a series of symptoms which give to the disease a pernicious form. In these cases, the countenance of the patient is profoundly altered, indicating stupor, there is great prostration; the pulse is filiform, compressible and sometimes irregular, and is very frequent, or on the contrary it may be slower than usual. After having persisted during several hours with great intensity, these grave symptoms decline progressingly or all at once. At the same time, the pain of the side and oppression in breathing diminish, the pulse loses its frequency, the powers of the system increase, and we have diaphoresis which is more or less profuse. If, during the remission, the local and general symptoms are seen to diminish in intensity, it is quite rare that *one* or *two* of them ceases entirely. Besides, auscultation and percussion have proved that the pulmonary engorgement does not undergo any change during the period of remission.

"Soon a new exacerbation declares itself, and the symptoms become more and more grave in proportion to the frequency of their recurrence.

But, one circumstance in these cases merits attention; it is that in exploring the chest attentively, we do not see the pulmonary change making proportional progress. M. Grifoulière observed that the hepatization, which he discovered within the first ten or twelve hours of the disease, remained afterwards stationary, and did not invade a greater extent of lung after three or four paroxysms. The periodical exacerbations are sometimes established from the very commencement of the inflammation; at other times the latter seems to exist without any perceptible exacerbation for several days, and it is not until towards the fourth day, sometimes later, as the sixth, seventh, or eighth, that regular exacerbations begin to be remarked, as if a new element had come to join itself to the primitive affection. The *time* at which the exacerbations come on, varies, but is regular; in the majority of cases they are quotidian; as was noticed particularly in the epidemics of Mayence and in the canton of Aubin: they are much more rarely double quotidian, or tertian, and I believe they have never appeared in the form of a quartan. The hours at which the exacerbations occur are not constant; J. P. Frank observed them generally during the course of the day, the remission taking place in the evening or night; whilst in the epidemic in Aubin, M. Grifoulière remarked that the exacerbations occurred once in 24 hours. and almost always during the evening or night.

"If the disease is to terminate fatally, the intermissions are less and less evident, and the phenomena which mark the exacerbations are more and more dangerous; finally, death ensues. In the epidemic in Aubin, if left to itself, the disease terminated fatally from the third to the sixth exacerbations, in the worst cases: and in the others a little later, or from the eighth to the tenth day. Death may take place by the extension of the pneumonia; at other times the patient dies during an attack of delirium, chill or coma. If on the contrary, the disease terminates in recovery, the exacerbations diminish in intensity and frequency, at the same time that the local symptoms improve." (*a*)

"Such is the career of pneumonia when complicated by the impression of a malarial law, as described by Grisolle, *condensed* and *ararnged* from the article referred to in his great work. How beautifully clear and simple is his delineation of the leading phenomena that signalize the action and dominant influence of malarial poison—how faithful is the portraiture of the most prominent and distinctive features which the accidental infusion of this special element

(*a*) Op. Cit. 427–434.

impresses upon the march of pneumonia? Let the reader compare it with the sketch which *Dr. Manson* has presented of the symptoms that mark the general course and progress of this complicated disease. Will the *French* author suffer by the comparison? Is *his* description of the affection '*sadly deficient for us?*' "

In addition to the above at the close of our critic's "Review," he imparts the important and interesting information to the public, contained in the following note: "We must here return our thanks to our kind friend, Dr. J. T. Chunn, of Baltimore, for having furnished us a translation of Grisolle's account of Intermittent and Remittent Pneumonia (see April No. of this Journal, p. 430) and also for a translation of Chomel's views respecting the crepitant rhonchus (see June No. 532.) As accuracy was required we preferred not to trust to our imperfect knowledge of the French tongue."

We have here presented the "great success" of the "French Author," with the prologue and epilogue of our critic whom we lastly behold appearing before the curtain and gracefully "returning thanks" to the kind friends who have contributed to his triumph.

Were our critic our "dearest foe" on earth we should wish for no better advantage than he has furnished us, by thus extravagantly endorsing M. Grisolle's account of "Intermittent and Remittent Pneumonia," as being not only either cursory or imperfect, but as "a faithful portraiture of the disease in question." Before proceeding further, let us first enquire, what is the disease in question? Why of course Bilious or Malarial Pneumonia, but which, however, our critic informs us, "M. Grisolle has given under the caption "*Pneumonie intermittente et remittente.*" Well so far we understand each other. Now in order that we may fairly appreciate the correctness of M. Grisolle's account of Bilious or Malarial Pneumonia, "under the caption *pneumonie intermittente et remittente,*" let us in the first place

compare Grisolle's account of the bilious symptoms, with those enumerated by Eberle, Wood and Drake; and lest we might give offence by omitting them let us also collect together from this Review, those given by our critic himself. We will display them in opposite columns in order that the reader may perceive at a glance the striking resemblance between all of these 'faithful portraitures" of the disease in question.

The American author's account of the Bilious symptoms "in the disease in question."	The French author's account of the Bilious symptoms of the disease in question.
EBERLE.	GRISOLLE.
"A sense of fullness and tension in the right hypochondrium—*Skin* from the *beginning* more or less *tinged* with *bile*, the *conjunctiva* especially often conspicuously *icterode*—face flushed and sickly mixture of red and *yellow* betrays the existence of a disturbed state of the *liver* (Potter.)* Sputa of a frothy *yellowish* appearance, *vomiting* very common and more or less *bilious* matter thrown up—*tongue* with a *yellowish* streak along the middle. *Urine* always of a deep *yellow* or *bilious* color.	
WOOD.	
"Yellow or yellowish white fur on the tongue, nausea and *vomiting* sometimes of *bile*—a more or less *yellowish* tinge of the *skin* and *conjunctiva brownish color* of the *face* arising from the mixture of the pneumonic redness with the *icterode* hue." *Urine* deep colored, *yellowish* brown."	
DRAKE.	
"Such is the derangement of the *biliary* function that *bilious* symptoms are *decidedly present* in a *large proportion* of cases. In some the secretion of *bile* is *excessive*—the fur	

*The reader will notice that Eberlee quotes Potter's description of Bilious Pneumonia.

on the tongue assumes a dirty *yellowish* tint—there is a *little* taste in the secretions of the *mouth—vomiting* and *purging* of *bile* occur, and now and then *eructations* of *that fluid. Its presence* is also manifested in the *urine*—the *serum* of the drawn *blood* and as I believe but not on conclusive evidence in the *sputa* from the *bronchial tubes, etc.*"

DR. HOWARD.

"Bilious vomiting and other evidences of hepatic trouble much oftener present themselves in pneumonia offering positive proofs of the mingling of a malarious element, than when no such proofs are present; and consequently when taken in connection with other phenomena should arrest attention as among the *corroborative* tokens of that *special influence.*"

"For the *most* part there are marked tokens of biliary disturbance and every leading peculiarity reflects the impress of the periodic fever element."

"In simple and malarial pneumonia alike nausea and vomiting of bilious matters may occur, but they are much oftener present and much more prominent in the malarial form."

"Bilious vomiting occurs in the mass of cases attended by abiding nausea, painful sense of fullness and some tenderness upon pressure over the right hypochondrium. The tongue is stained with yellow or greenish yellow, the eyes and skin are tinged with yellow in a certain number of cases and the face then, as Potter† aptly remarks, presents a sickly mixture of yellow and red.

"The urine is frequently of a deep yellow or dark brown color from the presence of bile and the serum discharged from blisters may be yellow from the biliary impregnation of the system."

"*The Tragedy of Hamlet in which the character of the Prince of Denmark is omitted by particular request!*"

†The reader will also please observe that our reviewer quotes Potter.

Not one bilious symptom! not a single evidence of hepatic disorder!—a bilious disease minus bile! Indeed without a symptom of a malarial disease which our critic admits to be certainly diagnostic of "pneumonia complicated by the impression of a malarial law." It is true, that Grisolle mentions that the *fever is remittent and paroxysmal*, but we have also seen that our critic contends, that the fever may be "decidedly remittent or paroxysmal" in cases in which there is no malarious complication, and that not unfrequently. It is true that Grisolle mentions headache as occurring in the exacerbations, but we have seen that our critic asserts, that "Headache is common alike to simple and malarial pneumonia." It is true that he also mentions delirium at the acme of the paroxysms, but our critic has as positively declared that he "*cannot* admit, that delirium either by the *frequency* of its occurrence, the *time* at which it appears, or by its *character* offers *any special indication* of pneumonia imbued by the poison of *malaria;*" yet in despite of all this, our critic enthusiastically cries: Make way for the greatest of all modern standard authorities! how beautifully clear and simple is his delineation of the leading phenomena, that signalize the dominant influence of malarial poison! Behold! how faithful is the portraiture of the most prominent and distinctive features which the accidental infusion of this special element impresses upon the march of pneumonia!" But hold! let us not be too rapidly hurried away by the rhapsodies of our critic—he has too often, as we have seen, thought proper to modify his opinions, that we should not be somewhat distrustful of following him too implicitly. We have said that he had indulged himself in a resumé in the latter part of his paper, the evident object of which was to correct the errors in the first, and *lo!* here in the *review reconsidered*, we find him turning up again on this point, and holding the following modified and subdued language:

"*Nausea bilious vomiting and an icteroid tinge of the tongue, eyes, skin and*

"*urine*; These phenomena are certainly very conspicuous in a *certain* "*number* of cases connected with the diathesis of periodic fever, but they "are absent in many cases as they occur in this latitude at least, obvi- "ously impressed by a malarious influence. *They are not mentioned by* "*Grisolle*, whose description of Intermittent and Remittent Pneumonia in "*most respects* so excellent, is drawn from the writings of many authors, "both ancient and modern scattered through the annals of science."

Of all the blunders ever committed by a critic, who set out on a crusade against the errors of others, this declaration, that these bilious symptoms are not mentioned by Grisolle, is the most glaring and egregious. Will not the reader be astonished, when we inform him that in this identical work of M. Grisolle, yea in this self-same chapter from which Dr. Chunn has translated the "account of Intermittent and Remittent Pneumonia, for his friend Dr. Howard, that there is to be found a whole section, devoted to "Bilious Pneumonia" (Pneumonie bilieuse) in which *all* of these symptoms *are* mentioned over and over again. In fact it is the very first disease which Grisolle considers under the head of "*Forms of Pneumonia*," but which our critic who "has so often referred to the work," albeit distrustful of his French, as well as his friend Dr. Chunn who reads French so well, have entirely ignored. To prove this and for another purpose, which the reader will perceive, we translate the following from the work itself.

FORMS OF PRIMITIVE PNEUMONIA.

§ 1.—BILIOUS PNEUMONIA.

There is a variety of pneumonia in which the symptoms of the pulmonary phlegmasia, coexist with the group of symptoms, known under the name of the *bilious* or *gastric state;* excellently described by Stoll and which may be profitably recalled here. The face is yellowish or of a pale green—the headache is of a dull character and a similar pain is felt in the cardice region. There is little or no thirst, the patient experiences a *bitter* taste in the mouth, some-

times nauseous or acid. The tongue at first white is soon usually covered with a *yellowish* fur, the teeth are encrusted, the epigastrium is apparently swollen and is the seat of a sensation of fullness. Some patients vomit spontaneously *bilious* matters, whilst others merely suffer from nausea—there is an abundant flow of saliva, a loathing of all species of aliment and finally there is constipation, or occasional *bilious* stools,

The commencement of bilious pneumonia, was sudden and attacked the individuals in perfect health, in 8 cases. In two, there were some precursory symptoms, and in one of them a slight bronchitis and gastric disorder preceded the attack. With the exception of this patient, in whom bilious symptoms preceded the pneumonia for several days, of the remaining cases the symptoms referable to the digestive organs, declared themselves simultaneously with the pneumonia in two patients, and in the second, third, fourth or fifth day in six cases, that is to say in the majority of them.

In regard to the general symptoms, I have observed, that with the exception of one case, the pulse was soft, feeble, compressible, and bore no relation to the intensity of the disease or the apparent strength of the patient. In the majority of cases also, the heat of the skin was intense, dry and sometimes frequent; finally in one third of the cases, there was observed a depression of spirits and prostration of strength disproportionate to the extent or intensity of the pulmonary lesion. The cephalalgia which was always limited to the forehead, was dull, and persisted longer than in the ordinary phlegmasia. To these symptoms were always united, a series of phenomena, indicating disorder of the digestive organs; thus all the patients experienced a bitter taste; the tongue in two-thirds of the cases was covered with a thick yellowish coat and whitish in the others; in all, nausea was present with a desire to vomit, and in almost two-thirds of the patients, slight vomiting occurred once or more times or simple regurgitation of bitter and

acrid matters which was always followed by relief. The thirst varied in degree, and seemed rather in proportion to the intensity of the febrile movement, than referable to the condition of the stomach. In three patients the epigastrium was the seat of pain, which was increased by pressure, and only yielded to the employment of evacuants. In three-fourths of the cases, constipation existed, in the remainder, there were some small liquid stools, which were usually discharged without pain. Finally, in one third of the cases, the skin was sallow, or of a yellowish hue, and the countenance was expressive of suffering. In the remaining cases, the face presented a natural appearance, not unlike that which it presents in frank pneumonia.

Influence of age. Bilious pneumonia is principally observed in young persons, or in the adult. Although recent authors, who have studied pneumonia in the aged and in infants, have not noticed the bilious form of the disease, it however appears from the researches of N. Potter,* professor in the University of Maryland,[1] and of *Dr. Garvin*,[2] that it may be observed at both of the extremes of life; but these authors have observed that it occurs more rarely at those periods.

Climates, countries, seasons. * * * According to the researches of Doctor N. Potter, bilious pneumonia frequently occurs in several of the United States and particularly in those, where independently of the deleterious influence of malaria there are also observed sudden variations of temperature, circumstances which impart intensity and gravity to the disease. On this account in the middle states, the disease is intensely developed, whereas, in the eastern states, the disease is less strongly marked. It is worthy of remark, that according to Doctor Potter, bilious pneumonia has become very common in places where it was

* This is the same author referred to by Eberle and Dr. Howard in their account of the bilious symptoms in the malarial disease.

[1] Baltimore Med. and Surg. Journal and Review, Jan. 1834.

[2] Southern Med. and Surg. Journal, of 1837, (Augusta, Ga.)

previously unknown. Thus in the state of New-Jersey and on the river Delaware,* it has become more common within the past twenty or thirty years, the same may be said of the region of the Potomac and the old settlements of the south, where it is now very frequently observed and assumes the typhoid form. It is also prevalent in the southwestern states.

According to Dr. Garvin, bilious pneumonia principally attacks those persons, who have experienced attacks of autumnal intermittent fever. In the opinion of the same author, those persons who have been exposed to malaria, though they may have escaped intermittent fever, are more subject to the disease, than those who have resided in healthy localities."

Here the reader has presented in *extenso* all the bilious symptoms mentioned by Eberle, Wood, Drake and our reviewer, as pertaining to the malarial disease, and yet the latter declares, that the bilious symptoms are not mentioned by Grisolle. The reader will at once perceive that the reason which has led our reviewer to make this declaration is, that his friend "Dr. J. T. Chunn of Baltimore," having been sent on a search for the bilious disease by his friend Dr. Howard, and being as ignorant of the disease, as his friend Dr. Howard was of the French tongue, *has translated the wrong section*, whilst our reviewer, like a great many others as determined in praising all that is foreign as he is to "disable the benefits of his own country" has gone into ecstacies over an author of whom he possessed only second-hand information. But the reader will perceive more than this. Without any thread being given him by us, to guide him out of this labyrinth; without any illumination from us, to dispel this "confusion worse than confounded," he will perceive at a glance, that M. Grisolle, not having any

*Grisolle has it, "*l'etat de Persey* and *les rives de la Ware.*"—literally—the state of Persey and the rivers of the Ware—the French author knew as little of the geography of our country as we shall soon see he knew of our diseases.

personal knowledge of the malarial disease and having derived all his information as he himself declares* from the accounts of others has divided a disease which is essentially *unique* into two separate and distinct diseases. Having collected his materials for his section on Intermittent and Remittent Pneumonia, from the French treatises on *Pernicious fevers*, in which *bilious symptoms* are given *no* especial *prominence*, he has been led to *omit* them *altogether*, and having gathered the materials of his *Bilious Pneumonia* from *Stoll*† and the *American authors* who dwell particularly on the *Bilious symptoms*, he has not noticed its *periodical character*. We have not seen the paper of Potter on Bilious Pneumonia, but the reader has perceived that Eberle and our reviewer himself have quoted him as an authority on the bilio-periodical disease—whilst Grisolle cites him in his section on Bilious Pneumonia, in which the periodical type is unnoticed; nor have we been able to obtain the paper of Dr. Garvin of Georgia, which we have seen quoted by Grisolle in the same section, but if their accounts do not mention the periodical character of the disease, they are worthless and untrue to nature. Said we not aright then reader, that the works of foreign authors on this subject are "sadly deficient for us," when we behold M. Grisolle, whom our critic declares stands *pre-eminent* among those who have *studied* and *elucidated* the subject of *pneumonia*" so mutilating this form of the disease, as to render it unrecognizable to the student, and who has so disarranged

*C'est à l'aide de ces divers faits—i. e. les observations de pneumonies périodiques contenues dans lesannales de la science—que je vais essayer de décrire la maladie (p. 431,) and again in his observations on the treatment of the disease he says with diffidence—N'ayant recucilli aucune serie de faits de pneumonies intermittentes, je devrais peut-être m'abstemir de donner ici une opinion. (p. 727.)

†*Ratio; Medendi* paro prima. Parisiis, 1787, p. 6.

As Pinel, Andral and Chomel all assert the disease described by Stoll indicated Catarrh with gastric disorder rather than pneumonia. However, it is evident from his description that some of these catarrhal cases terminated in pneumonia.

the *disjecta membra*, that our critic as well as his translator have mistaken the section which treated of the American disease.

But we have not done with our critic or the work of M. Grisolle. However correct Dr. Chunn's abridged translation may be, so far as it goes, yet there is an important paragraph contained in M. Grisolle's account of Intermittent and remittent pneumonia, which doubtless has been accidentally omitted or at least unnoticed, and which if admitted to be true, destroys the whole foundation upon which the review of our critic is based, and which sustains the most important position taken in our essay. After analysing the accounts of this form of pneumonia as given by Morton, Frank, Alibert, Maillot and others, Mr. Grisolle thus clearly expresses himself. "It follows from the preceding, that pneumonia may be developed under the influence of the causes which produce intermittent fever, and in these cases the symptoms peculiar to the phlegmasia appear to be subordinate so to speak, to the febrile movement, as they follow its march, that is to say that they commence, increase and cease, or at least diminish simultaneously with it. *Pneumonia may then become one of the forms of pernicious fever.* Of all the pernicious intermittent fevers of which the characteristic symptoms are furnished by the thoracic organs, peripneumonic fevers appear to be the most frequent," and again, "It is certain, that according to the case reported by M. Maillot, that the local symptoms of pneumonia, may disappear during apyrexia, and reappear in the next paroxysm; but in this case the disease has not passed the first degree."

Here the reader will perceive that M. Grisolle admits facts, and enunciates views, which fully coincide with our own concerning the pathology of the disease, viz; that Malarial pneumonia instead ot being "ordinary pneumonia complicated by the impression of a malarial law," according to Dr. Howard, or a combination of two distinct and independent diseases, according to the pathology contended for

by La Roche, may be a form of malarial fever, the lesion of the lung, being merely one of its local determinations, developed under the influence of the cause which produced the fever, and with its like all the other local symptoms, arising, increasing and ceasing with it. This we believe, and as we shall hereafter endeavor to prove, is the true pathology of our Southern form of pneumonia, a pathology which as we have seen our critic vehemently contests and which the voluminous essay of La Roche was written to refute.

Whatever views, however, may be entertained in regard to its pathology, we have written enough to prove that this section of M. Grisolle, cannot be considered as an exception to the declaration we have made, that this disease has been "only cursorily and imperfectly noticed by any of the modern standard authorities." Let us not however be supposed as desiring to detract from the real merit of this writer. His Traité de la Pneumonie is a monument of laborious research of sound reasoning and rare discrimination. Had its author have had an opportunity of studying the malarial disease at the bedside he doubtless would have quickly observed its salient points and have rendered as correct and comprehensive representation of its phenomena as he has of those forms which he has observed. In this regard we cannot extol it too highly. May the day be not far distant when some son of our young confederacy may as fully and perfectly delineate the southern disease as its other forms have been portrayed by M. Grisolle.

SELECTIONS.

Military Surgery.

Material of Armies Recruiting, Clothing, Food, Encampments, etc.

The *soldier's coat* should be a frock fitting loosely, easy over the shoulders, with full play for the arms, without binding in any way, and wide in the body, so as not to impede the expansion of the chest when closely buttoned. The tail of a coat gives much protection to the body and abdomen from damp, whilst a jacket—which is a very poor costume for soldiers—exposes the entire body to drafts and dampness, fruitful causes of bowel complaints. The *trousers* should be of good, heavy wollen material, made also free, for the easy play of the limbs. *Flannel shirts*, coming well down upon the thighs, and drawers of the same material, are of great hygienic utility. In winter they retain the animal heat and support the healthy function of the skin, whilst in summer they absorb more readily the excess of perspiration, which occurs under severe exercise; and whilst agreeable to the wearer, they prevent sudden arrests of perspiration, and are thus a protection against diarrhœa and dysentery, which are so fatal to armies. These should be furnished in sufficient numbers to enable the soldier to change when he has been exposed to rain, as he may thus prevent pneumonias and bronchial affections, so common to camp life.

* * * *

Cleanliness.—Nothing contributes more to preserve health than personal cleanliness; and as the free use of soap is a

prophylactic as well as a civilizer, it should be regularly distributed to the men. Daily ablutions should never be omitted; and, if possible, the chest and arms, as well as the face and neck, should be well sponged. Baths should be used whenever opportunity permits. *Keeping the skin clean prevents fevers and bowel complaints in warm climates.* Baudens, in insisting upon cleanliness, says "that the contrast in the sickness and mortality of the English and French camp in the Crimea, can be in a measure attributed to the frequent ablutions of the English, who washed their clothes in hot water, and changing their underclothes twice a week. It is easy to understand how carelessness in this respect will impair the functions of the skin and induce disease. At review, our French soldiers show new clothes, and on the whole an unquestionable military equipment, yet these beautiful battalions leave in their passage a strong smell of barracks not to be mistaken."

It should be the duty of the medical officer to suggest to the commanding officer to insist that these hygienic regulations be rigidly enforced. He is not only the best, but also the most popular officer, who attends himself to the detailed comforts of his men.

* * * * * * *

Fresh meat and vegetables should be served out to troops whenever they can be had, and the best mode of cooking them is in soup. A French military proverb says that "soup makes the soldier." The free use of fresh vegetables is the only mode of preventing the appearance of scurvy among the troops. When these cannot be obtained, the free use of dried vegetables, as rice, potatoes, corn-meal, etc., will tend to sustain health and vigor. In the Crimea, where the temporary absence of fresh vegetables was a great and serious privation, lime juice, citric acid and sour-crout, were extensively used to prevent and stop scurvy.

Acid fruits are anti-scorbutic, and very good for soldiers. The English in the Crimea, gave out a ration of lemon juice three times a week, which, when mixed with rum

and sugar, made a very nice and healthy drink. This corrective protected, comparatively, the English soldiers from scurvy, whilst with the French it was widely epidemic and very fatal. Vinegar, when freely distributed, also assists in preventing this scourge among troops. Vinegar, molasses and water, when mixed in proper proportions, make a very refreshing and palatable drink, not unlike lemonade, and possessing similar anti-scorbutic properties to lemon juice. A distinguished military surgeon has remarked that 100,000 francs spent in fresh vegetables will save 500,000 francs from the expenses of sick soldiers entering the hospital, besides the use of the men for active service. Of the dried vegetables, rice is the best for feeding troops. It is easily carried, easily cooked, easily digested, and is the most wholesome of the farinaceous articles, correcting intestinal fluxes. Biscuits or hard bread, is a common article of diet in camp life, because it is easily preserved and transported. When eaten as dry biscuit, it acts like a sponge in the mouth, exhausting salivary secretion, and tiring the jaws, it produces surfeit. When possible, and rarely it is not convenient, soak it in tea, coffee or soup; it then makes a very nutritious meal. Even water, with a little salt, makes it much more palatable and nourishing. Fresh bread is always preferable when it can be obtained.

Bacon is, par excellence, the laborers' and soldiers' meat in America, and goes further, by weight, than any other. It never produces surfeit, is always acceptable, very easily cooked, and with its rich juice will make the dryest farinaceous diet savory. It has the very great advantage of keeping for any length of time, under any condition, which makes it far preferable to any other meat for troops.

* * * *

The following is the order which experience has proved to be most useful in the French service. A soldier should never commence a march without having partaken of a repast. A cup of hot coffee with bread soaked in it will

sustain a march of some duration. A little meat would be an improvement, which is always saved by the prudent soldier from the previous day's meal. For night marching, an alcoholic drink after the meal will enable him to undergo much more fatigue.

Preparatory to marching, the soldier fills his canteen with good water, or what is much more refreshing, weak coffee or tea. The start, especially in summer, should always be at the break of day. After marching three-fourths of an hour, the column stop for twenty minutes. In resuming the march, a halt is made for a few minutes in each hour. In crossing a ford, the men take off their pantaloons, keeping on their shoes. A sentinel guards any fresh-water spring which is met in the march, to prevent soldiers from gorging themselves—a very wise measure, which prevents much sickness.

Water should always be taken in reserve and with precaution. When taken in great quantities it weakens and fatigues the organs of digestion, increases perspiration and enervates the entire system. It is particularly injurious to drink rapidly and freely when heated from exercise, as sudden death is not very rare from this imprudence. The soldier should accustom himself, when thirsty, to drink slowly and in small mouthfuls, keeping the water in the mouth and throat as long as possible. The cravings of thirst are often produced by a parched condition of the lining membrane of the mouth; and by rinsing the mouth frequently, thirst can be allayed to such a degree that but little water will be required, whilst much, hurriedly drunk, will not satisfy the urgent call. In marching, thirst can, in a measure, be prevented by keeping the mouth closed, and in speaking as seldom as possible; otherwise, the dry air often loaded with dust, will parch the lining membrane of the mouth—a very distressing sensation when it cannot be relieved by drinking. When, during a march or halt, the fatigued and thirsty soldier finds water, instead of rushing to it at once, he should first try and repose himself

before drinking; then, having washed out his month several times, drink slowly so as to make the smallest possible quantity of water supply his necessities. Washing the face slackens thirst.

As good water is not always to be obtained on a march, a soldier should never lose an opportunity to fill his canteen with fresh water. If the canteens be covered with a light colored wollen cover, the water will keep cooler than in bright tin, which absorbs heat more rapidly, and extends it to the contents of the canteen. When troops have had an early start, they should bivouac about ten o'clock in the morning, and lie over for the heat of the day, as soldiers on march should, if possible, be protected from midday sun. Here they will have time to cook their midday meal, wash their clothes and refresh themselves from their fatigue. This meal consist of coffee and bread, with meat cooked and saved from the preceding day's repast. The want of this precaution, which old soldiers adopt, is severely felt by recruits. The experienced soldier never forgets to keep in reserve a certain proportion of meat or other food, against a deficient distribution or the want of time for properly preparing it. The meal should be taken in the shade, under some protection from the sun. A few branches properly arranged, will form a comfortable shelter. The main meal or meat, vegetables, etc., should be taken after the evening halt, at the end of the day's march. The officer in charge of the troops should always know the road over which he is to travel the next day, and when he is compelled to bivouac in places where the prospect for getting wood is bad, each soldier should carry on his knapsack a small quantity to cook his midday meal with.

In the evening halt, the site selected for the camp, when possible, should be on rising ground, free from low places, and in proximity with water and wood. These rules become of special importance in establishing a camp for even a few days stay. It is prudent to avoid the immediate vicinity of swamps and rivers; the emanations from such

are noxious, often pestilential, but fortunately do not extend to a great distance. Interposing a piece of rising ground or woods is, as a general rule, sufficient to turn or break currents from these low places, and protect from their hurtful influence. It would be preferable to camp in the direction of the regular wind currents, so that emanations may be wafted in the contrary direction.

When the halt is for the night, and the camp wagons with the tents have not come up, the men bivouac under the clear sky, or seek shelter under a few branches, with which they form a rough shed that will protect them from dew. If possible dry grass or leaves form their bed, and, lying in their great coats upon their india-rubber cloth, they can enjoy peaceful slumber. If there is no cover for the men, then they build fires, and sleep around these as so many radii of a circle, the feet of the sleepers being nearest to the fire. Singular to say, this kind of rough life does not bring with it disease, as one would suppose. If the men are warmly clad, they enjoy more health when bivouacked than when in camp.

The site of a permanent camp should be dry, with good drainage, the dryness of the soil being tested by digging, to see that a stratum of water does not immediately underlie the crust. In cold, damp countries, the material for tents should be close, and, as nearly as possible, water-proof; and when pitched, a good ditch should be dug around it, with the earth banked up against the tent to keep out the cold and rain, and also to prevent draughts. Communicating ditches should be provided to facilitate drainage.

* * * *

Extreme cleanliness should prevail within and without the tent. In an encampment the tents should never be crowded, but ample space should be left around each tent for changing its position at least every four days, so as to purify the soil infected by habitation. The earth floor of a tent attracts and absorbs impurities which, unless changed would soon render it a source of disease. Permanence of

camps rapidly induces infection. This frequent changing of tents gives, to be sure, additional trouble to the officers, but this is more than counterbalanced by the health and efficiency of the command. All the garbage of the camp should be thrown at a distance from the tents, and should be buried every evening. The privies for the men are ditches, from three to five feet deep and three feet broad. They should be placed at least one hundred yards from the camps and in an opposite direction to the wind currents, so that offensive odors will be blown away. The slaughter pens should also be placed at a similar distance. Every evening the offal of the day should be covered with three or four inches of earth or a sufficient layer to prevent any smell arising from the day's deposit; and when the trench is two-thirds full it should be closed and another of similar dimensions opened. Where proximity to the water permits, these privies should be established over the water. This will remove a great and common source of infection, which is very difficult to counteract.

* * * *

To ensure a comfortable abode for the sick, the site of the regimental hospital should be selected with much care —the driest spot in the camp should be chosen, and the tent well ditched to give thorough drainage. The floor of the tent should be carpeted with oiled floorcloth or painted canvas, which will protect the sick from the emanations from the soil, and will prevent the soil from imbibing animal effluvia. It also keeps out all moisture, which is so deleterious to those lying upon the ground. This painted cloth strictly belongs to the hospital tent, and, as an essential part, should never be overlooked. A certain number of bed-sacks also belong to the hospital. When these are filled with straw, they make a much more comfortable bed than straw thrown in heaps, which is the common mode of treating the sick in the field. There is much comfort in appearances, and these beds add much to the neatness as

well as cleanliness of the tent. The beds are arranged on either side of the tent, with the heads turned toward the wall. Could the beds be elevated upon boards for six or twelve inches, they would place the sick in a purer atmosphere than when lying on the floor, where the heavy deleterious gases of expiration collect. In good weather ventilation of these tents should always be insisted upon. When the painted floor-cloth is not at hand the earthern floor should be well rammed, and should be daily watered with a milky lime water, as a purifier.

The straw should be changed as often as possible, even twice a week, if it can be procured; whilst if the patient can get up, the bed should be well beaten and thoroughly aired daily. *Personal cleanliness of the patient is as important as that of the tent.* Ablutions must be freely used, and under-clothing frequently changed. Whenever the patients permit, the tent should be moved once a week, if it be only a few yards from its former position, so as to enclose a fresh piece of soil not contaminated with animal exhalations. This change of location is particularly required whenever any of the low grades of contagious diseases appear within its walls, or cases under treatment take on an asthænic character.

* * * *

Camp Duties of a Regimental Surgeon.—We have already shown that the fire of an enemy never decimates an opposing army. Disease is the fell destroyer of armies, and stalks at all times through encampments. Where shot has destroyed its hundreds, insidious diseases, with their long train of symptoms and quiet, noiseless progress, sweep away their ten thousands. To keep an army in health is, then, even more important than to cure wounds from the battle fields. But, as such surgeons in the service are expected to be skilled in both departments, so that, in either case, the troops under their care should suffer no detriment, they should be thoroughly prepared for the very responsible positions which they fill. Conserv-

ative surgery requires much more at the hands of the surgeon than the destructive practice of former times. Every surgeon should now prepare himself for the field by familiarizing himself with operative surgery. Half knowledge leads into meddling, which is far worse than no surgical assistance. *Many a wounded soldier has felt heavily the busy hand of the willing surgeon who lacked the guiding head.* The surgeon has charge of a number of very valuable lives, and the necessity imposed—by the absence of consulting aid—of deciding the most serious and critical cases upon his own unaided judgment demands upon his part, self-reliance, which can only be based upon previous preparation. Camp life gives a surgeon much food for thought and ample personal experience, but gives him no time to consult authors and improve himself with books. He does not see so great a variety of diseases as are met with in civil practice, but he has a wider field for observing the influences of external modifying circumstances, as exposure, improper food, imperfect clothing, irregular work, want of cleanliness, and depressing or exhilirating mental influences. The diseases of a soldier, like those of most trades, are peculiar, each trade begetting its own, whilst it gives immunity to others. The greater uniformity in age, constitution, modes of living, exposure to similar external influences, and strict discipline, modify to a considerable extent the diseases of camp. It is especially the crowding together with the animal emenations from such a number of living beings, that gives character to the phases of disease.

The preservation of the health of the soldier being the sole duty of the military surgeon, he will be expected to use every means within his reach to attain this desirable end, especially by a rigid observance of those forms of discipline and economy which are under the direction and surveillance of the military officers. As diseases will arise among troops, and, as very few of these cannot be arrested by means of art when skilfully applied at an early period, care should be taken that medical skill be promptly resorted to at the

very first sign of indisposition. Hygiene must first claim his attention; under the adage, prevention is better than cure. If the troops are about going into camp he must examine the ground and see whether any causes exist for rendering the place insalubrious. When in a friendly country he should seek information from the local physicians, which will not only give him a better insight into the sanitary condition of the point selected, but will also instruct him upon the diseases prevalent in the locality, and the means which local experience and observation have proved most effective in controlling such diseases. He must see that the troops in camp are supplied with dry straw for beds, and that they air the same with their tents daily, so as to ensure a healthy place for repose, and report any neglect to the commanding officer. He must see that the soldiers are properly clothed and well fed with wholesome; nutritious food, and supplied with an abundance of good water, and, from time to time should suggest to the commanding officer such changes in the diet as will be conducive to the health of the command. If the water is bad, he should study how it can be improved, so as not to act injuriously upon the men. Cleanliness of the encampment and of the tent with frequent ablutions of the body and clothing of the soldiers, should never be absent from his thoughts. He should point out to the commanding officer all nuisances which promise to be detrimental to the health of the corps, and urge their removal, suggesting how they can be best disposed of.

The hospital tents will be pitched upon a dry, well-drained spot, if a building cannot be obtained for the same, and it is the duty of the regimental surgeon to attend to the proper furnishing of the same with all possible conveniences for the sick. He will enforce all proper hospital regulations to promote health and prevent contagion, by ventilation, scrupulous cleanliness, frequent changes of bedding, linen, etc.

At the morning surgeon's call, the sick of the regiment

will be conducted to the hospital by the first sergeants of the various companies, who will each hand to the surgeon a list of all the sick of the company, on which the surgeon will state who are to ramain or go into hospital; who are to return to quarters as sick or convalescents; what duties the canvalescents in quarters are capable of performing; what cases are feigned, and any other information in regard to the sick of the company he may have to communicate to the company cammander. He will then distribute the patients in the hospital, see that they are properly provided with comfortable beds; enter in the proper register the name, the case, the disease; and in the diet and prescription book the medicines which the cases requires. If his assistant is not present, he prepares the medicines and superintends their administration. He will visit the hospital each day as frequently as the state of the sick may require. Should any soldier be taken suddenly sick, his case is at once reported to the surgeon, who will visit and prescribe for him in his tent, unless the case threaten to be serious, when he should be removed without delay to the hospital.

Convalescents, on coming out of the hospital, are not to be put on duty till the surgeon certifies to the commanding officer that they have perfectly recovered; for which purpose it is the duty of the surgeon to make (daily) a particular inspection of these men at morning parade, to prevent any remaining longer exempt from duty than the state of their health renders absolutely necessary. After the surgeon's call, he will make a morning report of all the sick and disabled to the commanding officer. He also recommends that leave of absence be granted on furlough to those convalescents who will recover more rapidly by change of scene and life.

The senior medical officer of a post, hospital, regiment, or detachment, will make monthly, to the medical director, and quarterly, to the surgeon-general, a report of the sick and wounded, of deaths, and certificates granted for dis-

charge from disability, and transmit to him the same, with a statement of the hospital fund. He will also keep the following records, from which the condensed report of the superior medical officer is drawn, viz: a register of patients; a prescription book; a diet book; a case book; copies of his requisition; annual returns, and reports of sick and wounded; and an order and letter book, in which will be transcribed all orders and letters relating to his duties. All requisitions for hospital and medical stores must come from the senior surgeon, with the approval of the commanding officer, certifying that the same are necessary for the sick.

The duties of the assistant surgeon are very similar in many respects to those of the surgeon. If he has the confidence of the regimental surgeon, the patients are equally divided between them; he treating a certain number of sick ordinarily without interference from the senior surgeon, except they be serious cases, when he seeks advice from the regimental surgeon. Although this is the common course pursued, it is not so from right, but by sufferance of the senior surgeon. In the army regulations, the senior surgeon being the superior officer, the assistant surgeon is under his control. He is supposed to do merely the medical duties when the surgeon is present—that is to say, making up medicines, seeing that the patients get them at the proper time, apply dressings, bandage fractured limbs, keep the register, diet and prescription books, and assist in compiling the monthly and quarterly returns. When a detachment is sent off on special service, the assistant surgeon accompanies it as medical officer.

When epidemics occur in camp, then the duties of the medical officer become very arduous; the daily and nightly toil which they are compelled to undergo, the fatigue of body and anxiety of mind which is their daily routine, soon breaks them down, and many an over-zealous surgeon becomes a prey to the disease which his constant efforts are trying to quell in others. This is particularly the case

when typhus is raging in camp, when a neglect of those hygienic precautions which the medical officers are instilling into the men causes many a victim in the medical ranks. Under such conditions it becomes as imperatively the duty of the surgeons to take care of themselves as to attend to the sick; for should they needlessly sacrifice their lives, they entail severe suffering on their regiments. The Crimean surgeons were severely censured, after spending all day in the typhus and cholera hospitals, with tainted atmospheres, for remaining there during the nights also, when there was no necessity for it. It was a useless and dangerous imprudence, an exaggeration of duty, which deprives the army of well-informed men, and impairs the utility of the service. In the Crimea, the surgeons would frequently meet together for scientific conference and for mutual instruction. Here each gave his experience and compared the results of different methods of treatment. Their meetings always terminated in practicing amputations, resections, and the ligation of arteries on the dead subjects. The object of this was not only to gain dexterity in the operative manual, but also to find out who were the most skilled, and therefore most worthy of being intrusted with important duties. It is said that the mortality of the army amounted to two hundred per day, which gave ample material for such practice. These meetings were presided over by one of the highest staff surgeons or medical directors, who would often deliver to the society practical lectures upon the treatment of gunshot wounds. This plan might be carried out in all armies, as it must redound to the benefit of both surgeons and patients.

Duties of the surgeon on the Battle Field.—The common fear which depresses the soldier on the eve of a battle more than any other is not so much death, but the dread of mutilation. Bullets are neither respecters of parts nor persons, and the prospect of losing an eye, an arm or leg makes many a brave man quail before the ordeal through which he is to pass. So that before a battle there is a

vague, uneasy restlessness—a foreboding of coming evil, which takes possession of the bravest, and cannot be driven off except by the commencement of the fight. The early booming of cannon braces all for action, all thaughts of fear or self are now discarded, the demon of war rules triumphantly over the assembled host, and suppresses, through thirst for blood and desire for victory, all depressing influences. There is something in the smell of gunpowder which makes men forget their origin; by its magic wand women are made brave, and cowards heroes. In the eagerness of the fray, an intoxication guides all to acts of daring. Who, in his sober moments, would walk up to the mouth of a loaded cannon to which a torch is being applied? Yet on the battle field find the man who, at the word of command, and whilst under the stimulating intoxication from gunpowder, would not face certain destruction! Fortunate it is that Nature has so constituted us, or the terror of pursuing what duty dictates would be agonizing indeed. The surgeon on the battle field must participate in the dangers, without the stimulation of the conflict; he requires, therefore, a double proportion of courage to sustain him in the trying part which he has to perform.

Upon the eve of a battle, the regimental surgeon has much to do to prepare facilities for the treatment of the wounded. He must see that the hospital stores are brought up with the ammunition wagons, as the articles for treating the wounded and saving the life of comrades are fully as important as those for the destruction of the enemy. He examines his stores, and satisfies himself that nothing which will be required for the wounded has been omitted or forgotten. He examines his instruments, his supply of bandages, lint, india-rubber cloth or oiled or waxed silk, etc.; sees that chloroform and opium, the main support of the wounded, are at hand in sufficient quantity. Water he has not overlooked, as an abundant supply will be needed to meet the incessant, unmitigated thirst of the wounded. He should be well supplied with astringents, of which the

per chloride or per sulphate of iron is the best, to control annoying hemorrhage. He should also have a moderate supply of brandy to revive those exhausted from hemorrhage, oil to grease their wounds, and a little tea, sugar, and such medical comforts as will refresh and support the wounded. Having selected from the general stock those articles which he will need, such as all articles for dressing, as lint,* cloth, bandages, oiled silk, sponges, ligatures, adhesive plaster, splints for treating all varieties of fractures, amputating and dressing instruments, with medicines and stimuli, and a full supply of good water. These are carefully put upon a pack mule in two strong iron-bound boxes, called panniers, one hanging on either side of the saddle. One is usually devoted to medicines, the other is used for dressing apparatus. This distribution gives the surgeon great facility in moving about the field where his services may be most required, whilst it dispenses with the hospital store wagon, which is altogether too cumbersome to follow light troops in their varied and active movements. In European armies every regiment has such a pannier, which is continually resupplied from the medical store

*Carded cotton has been extensively used in military surgery, and was found in the Crimea to be a good substitute for lint by the French surgeons, with whom an abundance of lint is a *sine qua non* in the treatment of wounds. As it can be so easily obtained in any part of the Confederate States, and at so trifling a cost it promises speedily to usurp the place of the officinal preparation. Now that tents and meshes are scarcely used, and receptacles for collecting pus are denounced in modern surgical practice, we see no reason why carded cotton, with its very soft, elastic fibre, would not make a more soothing dressing than lint, which is often formed of coarse, hard threads, which would leave their marks upon a sensitive, inflamed surface, and therefore must be the unrecognized cause of pain.

Much can also be said of new cloth versus the old linen, of time-honored reputation. Suffice it to say, in this connection, that an army should never clog its movements by an excess of baggage, and that the old linen (which can be used but once) required for an army is no small item. New cloth may be washed a dozen times, if required, which in itself is no mean recommendation.

wagons. The commanding general may sometimes have good reasons, under particular circumstances, for ordering the medical wagons to remain behind with the baggage; then the conveyance of all needful medical supplies for the wounded on pack horses becomes imperative.

If the army would adopt those regulations of the Prussian service, which compel every soldier going into battle to carry in his knapsack a small bundle of dressings, prepared according to a formula, then the hospital stores could in a great measure be dispensed with, and with few additions to the individual stock, the wounded could receive careful dressing. The instruments and few medicines which the infirmary would require, could then be readily moved from place to place, following the line as the din of battle recedes from the points where the fight had commenced.

The surgeon should examine the means of transporting the wounded from where they fall to the field infirmary. These should consist of at least two stretchers for every one hundred men engaged, although in European armies, four are allowed to each company, besides light ambulance wagons, spring carts, or any other conveyance of transportation, to accommodate in the proportion of forty persons for every one thousand troops. The character of the transport service will depend upon the character of the country in which the war is carried on. In a level country, wagons are the most serviceable, whilst in hilly localities, litters carried by mules would be the most comfortable transportation for the wounded. In European armies, a distinct body of men are employed for conveying the wounded, so that practised hands may soothe the agonies of transportation. This is by far the most humane course, and as a mark of civilized warfare should be of universal adoption. It is highly important that a similar body be instructed to act as nurses as well as attend immediately upon the wounded, as this timely assistance may save many lives on the field. In those armies in which this sanitary

corps has not yet been introduced, the regimental quartermaster in charge of the pioneers and musicians, form a temporary body of carriers. Besides the litters, each bearer carries a canteen full of water, and the assistant surgeon, who follows the litters and directs the transportation, is accompanied by two men as orderlies. One of these orderlies who habitually follows the medical officer, whether in battle or on march, carries the hospital knapsack which contains instruments, ligatures, sponges, lint, oiled silk, bandages, tapes, pins, two field tourniquets, a bottle of brandy, and one of landanum or morphine, or other medicines which may be needed in an emergency on the march or in the field. One of the ordelies is armed to protect the party against stragglers and marauders. The surgeon, for a similar reason, should be also armed with a revolver. The orderlies assist the surgeon in placing the wounded carefully in the wagons; and also following them, are at hand to assist in unloading the wagons at the field infirmary.

When the troops deploy or form for action, the surgeons, with their assistants and pack horses, move a short distance to the rear out of the range of the shot, and they establish their field infirmary. It would be convenient if some house could be used for this temporary hospital.

Where this cannot be had, the shade of trees or the shelter of a hill-side will answer the temporary wants of the surgeon. If the body of troops about entering battle is a large one with an extended line, several of these points should be selected and marked by a suitable yellow flag which designates the spot where those slightly wounded can seek surgical aid. Instead of each regimental surgeon establishing such for his regiment, it would be much better if they would concentrate for individual assistance, when the wounded would receive more attention, and the work of dressing would be much expedited.

When surgeons combine at the field infirmaries, establish at once, if possible, a division of labor; let there be an

understanding that those best adapted by experience to undertake certain duties should confine themselves strictly to the same. When each one knows what roll he has to play, and does not interfere with others, a great deal more work can be accomplished than where each one acts independently for himself. The force of this will appear, when it is remembered that all experience shows the medical staff of an army, however numerous, to be always too few on battle day. *Remember that all the wounded must undergo a thorough examination, and all needful operations must be performed within twenty-four hours,* or the wounded suffer from neglect. Now, take into consideration the very small surgical staff of our army and the accuracy of fire of the contestants, with the most approved and destructive arms with very long range, and we will immediately see the necessity of economizing time and labor.

The movements and position of the troops and the character of the ground, must establish the necessity for the greater or less concentration of surgeons at the field infirmaries. As the troops advance, they are followed by the bandsmen or bearers and, if the country permits it, the ambulance wagons, under charge of the quartermaster and assistant surgeon with their orderlies. They station themselves in the rear of the advancing line, where they can distinctly see what happens, and remove immediately, without the range of the shot, those who may fall wounded. It is imperiously demanded, on the score of humanity, that the wounded be removed from the field of battle with as little delay as possible, for early treatment. In gunshot wounds, above all others, early surgical assistance is of the greatest moment for success; and in many, as in chest wounds, what is omitted on the battle field immediately after the injury is received is never made up, with whatsoever diligence and skill the after-treatment is pursued. Therein is the great advantage of having a special transport corps, otherwise the excitement of battle or the eagerness of pursuit carries the line to a distance from the ground

where the battle first commenced; and it is only after the victory is achieved that the wounded are thought of by their comrades, who, in scouring the field, find many a dear friend whose life has paid the forfeit of delay.

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As a soldier falls or is wounded in battle, he is at once approached by the assistant surgeon, who looks at his wounds, applies the hasty dressing which they require, then placing him comfortably on the litter, attends to his transportation. He can do as much for the wounded in this way as if he were actively engaged in operating. Should his injury permit him to walk, a compress and bandage is placed upon his wounds, if they be severe, and he is directed to the field infirmary. In those with fractured limbs, a rapid glance, quick intelligence, and an inventive turn, at once tells the surgeon what is required and suggests the means of effecting it. With a sword-blade, a ramrod or a bayonet, with a handkerchief or strip of cloth, a fracture apparatus is at once improvised, and the thanks of the wounded, now in comparative comfort, are freely bestowed during his transportation to the infirmary or general hospital. If he has a mangled limb, which hangs by a very small portion of the soft parts, the separation should be at once effected by separating the dangling parts in the mangled tissues. Should he be suffering much pain, which is not usually the case, the surgeon gives him a powder of morphine, with which his pockets are well stored, and at once transports him to the infirmary, where the proper amputation is performed. If the wound be an abdominal one, with protrusion of the intestines, he sees whether the bowel is injured or not. If not injured, returns it carefully within the abdomen, and gives a large dose of morphine to ensure quiet. Should the intestine be cut by the ball, he warns the carriers and assistants from interfering until the wounded man be carefully transported to the infirmary. In case of punctured chest wounds, with internal hemorrhage, coughing of bloody sputa and great oppression in the breathing,

the treatment, to be ultimately successful, must commence at once. The surgeon, in placing the wounded man in the litter, will, if the symptoms be urgent, open a vein in his arm to save him from immediate death. To this timely bleeding, on the very spot where the accident has occurred, and not wait until transported to a more convenient place, the life of the soldier often depends. Those wounded in the head, if insensible, require very careful transportation; they should be as little disturbed as possible. Chest wounds, head wounds, fractured legs give the most trouble, as they require the greatest care in conveying them safely to the designated place for surgical treatment.

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When the wounds are quite recent, before the tissues become engorged, there is a temporary absence of pain and a relaxation of the injured parts, which favors an examination. The wound should now be examined to its very bottom, to detect the presence of foreign bodies, whether they be balls, wadding, portions of clothing, detached spiculæ of bone, etc. *For this purpose the finger is the proper probe*, and is used on all occasions, with rare exceptions. It is an intelligent instrument, and, appreciating what it feels, it will not only discover the character of foreign bodies complicating the canal, but will avoid increasing the dangers by making new lesions in the depth of the wound. In fresh gunshot wounds, the apertures which the balls now used in warfare make, are large enough to admit the finger when introduced with care. Very rarely is it necessary to dilate a wound, with the probe-pointed bistoury, to assist in its exploration. *The silver probe is a dangerous and deceptive instrument, and should be discarded from the battle field.* Its use on such occasions, for exploring recent wounds, marks the novice.

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Should large arteries be injured, they should be ligated always in situ above and below the point injured, and for this purpose the wound must be enlarged.

As a general rule, torn tissues will reunite, whilst bruisd, crushed tissues slough. All wounds in which a probability exists of union by the first intention, should be nicely adjusted by adhesive plaster. The great inconvenience of the ordinary diachylon plaster, which requires heat to make it adhere, must exclude it from field service. The Husband's, or isinglass plaster, is much more easily applied, requires no heat, a little moisture being all that is needed, is not injured by hot weather, and when closing a wound gives as much support as the diachylon. It also excludes, completely, the air, with its injurious influences, which it not its least advantage.

Should a limb be so injured that joints are largely opened into, main blood-vessels and nerves torn through, soft parts extensively lacerated, or a limb flayed, then amputation should follow immediately the condemnation of the limb: field surgery here proves itself the only successful surgery, as all statistics clearly show. If the limb is simply fractured, even if comminuted without injury to the main blood-vessels and nerves, and without complications with joint injuries, they should be considered simple fractures, and dressed as such at the field infirmary. If, in connection with a condemned limb other mortal injuries exist, the impropriety of performing amputation is clearly seen. When joints are crushed, or the heads of bones perforated, resections are urgently demanded, and should be performed before reaction takes place.

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Although the nervous shock accompanies the most serious wounds, it may often be met with in the most trivial injuries. It is recognized by the sufferer becoming cold, faint and pale, with a surface bedewed with a cold sweat; the pulse is small and flickering; there is anxiety, mental depression, with at times incoherence of speech. Often this shock is very transient when accompanying simple wounds. A drink of water and a few encouraging words may be sufficient to dispel it. When it persists,

even where the injury appears trivial, it forebodes trouble; and a more careful examination may detect a fatal injury. It is the duration, more than the degree of the shock, which makes the serious character of the wound; and when this constitutional alarm persists, there is a great fear that hidden mischief is lurking, and the surgeon should be very guarded in his opinion of the case. Keeping the patient warm, in the recumbent posture, with blankets and hot bottles, administering wine, brandy, ammonia, hartshorn to the nostrils, frictions and cataplasms to the extremities is the course pursued to restore nervous energy.

In all painful operations, chloroform should be freely administered, to produce the designed anæsthesia. Like all valuable medicinal agents, which when taken in overdoses are poisonous, it can remove suffering or destroy life according to the administration. The dangers can be avoided by never pushing its inhalation to stertorous breathing; stop as soon as insensibility is attained. The recent Crimean and Italian wars, in recording the advantage of chloroform in field surgery, show it to be now one of the indispensables for successful practice.

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The common dressings which all wounds receive is a wet cloth covered with a piece of oiled silk or waxed cloth, and secured with a single turn of the roll of bandage. This keeps the wound moist, and is the most soothing, comfortable, efficient and simple dressing which can be devised. By wetting the outer bandage, the cold produced by evaporation is transmitted through to the wound, whilst the oiled silk keeps the parts moist. When oiled or india-rubber cloth cannot be obtained, and no facilities exist for keeping the wound constantly wet, whilst the patient is being transported to the general hospital, a cloth well greased with olive oil is the best substitute for the wet dressing. Many ragged wounds may have their edges paired off and then brought together, with every prospect

of speedy union, provided the after treatment with cold dressings is judiciously followed.

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The indications of treatment, in all gunshot wounds, are 1st, To control hemorrhage; 2d, To cleanse the wound by removing all foreign bodies, and, 3d, To apply such dressings and pursue such a rational course of treatment as will establish rapid cicatrization.

Hemorrhage, which produces such terror in the bystanders and anxiety in the patient, should never unnerve the surgeon, who requires all of his self-possession and surgical tact to cope successfully with this ebbing away of life. Fortunately, in gunshot wounds, serious hemorrhage is of rare occurrence; and when the largest arteries are injured, they either cease bleeding spontaneously, or the patient dies so rapidly, that art is of little avail. If the case is not injuriously interfered with, the natural hemostatics soon controls the bleeding. The ragged character of the wound, and the nervous shock accompanying the injury, or brought on by the loss of blood, reaction upon the circulatory organs, so diminishes the heart's impulse and drives so little blood to the extremities; as to favor a stagnation of blood in the wound. The formation of a clot plugs up the orifice in a bleeding vessel, and stops any further loss of blood.

This spontaneous arrest of hemorrhage is usually permanent; and if the ordinary prophylactic course is pursued of absolute rest and quiet, with the limb elevated and bandaged, no return shows itself. Should, on the contrary, meddlesome surgery suggest the use of a tourniquet, which cuts off the circulation and especially the veinous return, the limb soon swells, tissues become engorged, excessive extravasation in the wound follows, and a trail is laid for future mischief. The field tourniquet, in former days, was so much in vogue that it was considered indispensable on the battle field, and was therefore carried in large numbers, to be applied to every limb from which blood was trickling, or from which hemorrhage was feared. Now, they are

nearly discarded from field service, and recent experience recommends their abolition from the field, as doing more harm than good to the wounded. Unless very tightly applied, it is of no service, as it does not control the bleeding, and if firmly applied acts as a general ligature around the extremity, and can be used but for a short time without injury to the limb.

Recent writers warn surgeons of the too hasty use of hemostatics and suggest that it is better for the wounded to lose a little blood, which will diminish the heart's propulsive force, than have the wounded tissues filled with extravasated blood. If the hemorrhage be free, immediately after the receipt of injury, the best mode of controlling it would be the application of a ball of lint, a compress, or sponge over the wound, secured by a bandage, which, in closing the outer orifice, favors the formation of a clot. If the hemorrhage is at all active, as if from some large artery, in addition to the compress on the wound, the entire limb should be carefully enveloped in a bandage, to some distance above the injury, so that by compressing the soft parts it could diminish the amount of circulating fluid in the limb, and prevent the ingress of blood into the tissues. The hemostatic properties of this dressing can be increased by soaking the sponge or compress covering the wound with the per chloride or per sulphate of iron, which, as a powerful astringent, when coming in contact with fresh blood, will immediately form a clot. A lump of ice placed upon the compress will act with equal efficiency. A sponge or compress, with or without the iron styptic, tied on the bleeding wound, is all that the surgeon superintending the transportation of the wounded is expected to do. Unless the hemorrhage is very violent, threatening immediate destruction of life, the tourniquet is rarely required. All recent writers on military surgery recommend that field tourniquets be dispensed with, as they are generally a useless, and often when carelessly used, a dangerous instrument. The finger pressure of an intelligent assistant is

better than any tourniquet ever made, and is a far preferable means of controlling excessive hemorrhage, which the compress and bandage may fail to check. The femoral artery, for any injury to its trunk or large branches, should be compressed in the groin where it runs over the pubic bone; the brachial, where it pulsates against the head of the humerus, as here its course is nearly subcutaneous. When the position of these main trunks are shown to any intelligent assistant, and he is made to recognize the throbbing of the artery, he will have no difficulty in keeping the vessel compressed during the transportation.

As soon as the wounded arrives at the temporary resting place where the surgeons are assembled, all bandages are removed, and the wound carefully examined. A glance at the wound when the clothing has been previously examined, will often tell when there are two orifices differing in appearance and in a direct line with each other, whether foreign bodies have lodged or not. As the patient is now faint from the loss of blood and from nervous depression, the wound not yet being painful or swollen, the *surgeon using his finger, which is the only admissible probe on such occasions that the military surgeon recognizes*, examines the entire extent of the wound, searching for foreign bodies.

This examination is made without fear of reproducing hemorrhage, as the finger cannot displace the clots which hold firmly to the openings in the vessels. Every surgeon has noticed how rudely a stump might be sponged, and what force it requires to wipe away clots which formed over the face of a smooth, incised, open wound. The adhesions are increased a hundred-fold by the irregularities of a concealed bullet track. The finger finds no difficulty in entering a hole through which a bullet has passed, if examined, as every wound should be, before swelling has taken place.

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The wound having been carefully examined by the finger within and careful manipulations without, and the foreign

body detected, it should be at once removed. This rule may nearly be considered absolute, as all military surgeons place great weight upon its accomplishment. The question is not so much whether balls *can* remain innocuous in the flesh, *but do they?* Those who have had experience in gun-shot wounds in the field, know how excessive is the irritability caused by the presence of a ball in a wound; how restless and irritable the patient is until it is removed; how profuse the suppuration and prolonged the period of treatment in those cases in which it has been left; and how frequently the after-consequences are so distressing, the pain so permanent, and discharge so constant, as to demand future interference or make life a burden. If such be the case with ball, how much the more urgent the extraction of the foreign bodies is indicated, especially fragments of shell, portions of clothing, etc.

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If the ball be left loose in the soft parts, a bullet forceps can be made to seize it; and it can be extracted without difficulty, *provided the disengaged hand of the surgeon support the limb on the opposite side to that which the forceps is introduced.* Otherwise the ball glides in front of the forceps and cannot be seized. The ordinary bullet forceps, as simulating the dressing forceps of the pocket case, was the instrument prefered by Larry, and is still, deservedly, in general use.

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When a ball is firmly imbedded in bone, it is removed by boring into it with a gimlet, which holds it securely and permits sufficient force being used for dislodging it, or it may be cut out by using a trephine. Should a ball have traversed a limb, as it often does, and its escape be resisted by the tough, elastic skin which very often successfully impedes the further progress of the ball, it should be removed by making an incision over its position, and not

be sought and drawn the entire length of track which it had traversed.

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The ligation of an artery, which is the only sure precaution against the return of hemorrhage, is not only a difficult operation, requiring much skill for its successful performance, but when necessary to control the bleeding from a recent wound, becomes a very dangerous one to the safety of the limb or life of the individual. In cases of disease, nature, always on the alert, has enlarged contiguous blood-vessels, which are ready to assume all the functions of the one requiring obliteration. In a wound in a healthy person no such preparation has been made; and in cutting off the main supply of blood in a limb it becomes a very serious question, often answered by the loss of the limb and even life, whether the circulation will be re-established in time to save the limb from mortifying. When a ligature is placed upon the main artery of a limb for disease, previous developments in the collateral circulation, have been to such an extent, that the extremity may not even lose temperature after the ligation, and as there is no diminution of the nutrient supply there is no fear of mortification. If placed on a healthy vessel for an injury, the limb at once becomes pale and cold, requiring artificial warmth and the circulation be re-established, when the limb becomes actually warmer than its colleague. The arterial supply is now disseminated in vessels much nearer the surface than before, where its chief channel was deeply embedded in the tissues. The rapidity of this collateral development in the limb is well exhibited in primary and secondary amputations. When a thigh is amputated in a healthy portion, very seldom are there more than three or four ligatures required to stop all oozing and render the stump quite dry. If the amputation be necessary at the same point three or four days after an injury to the main vessel has been received, the number is greatly increased: as many as twenty-eight arteries have been

ligated by Langenbeck after amputating a thigh under similar circumstances.

Should active hemorrhage continue and show no disposition to cease, the wound should be dilated, the bleeding mouths of the artery found, and *a ligature applied both above and below the injury*. This has become the fixed practice and the only safe one, taking its place among the aphorisms of surgery. The universal adoption of this practice is not only based upon experience and observation, but could be determined *à priori* from the physiology and anatomical distribution of arteries.

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Guthrie lays down the two following rules as the great principles of surgery, to be observed in the cases of wounded arteries, and which ought never to be absent from the mind of the surgeon:

1. *That no operation ought to be performed upon a wounded artery unless it bleeds.*

2. *That no operation is to be done for a wounded artery in the first instance, but at the spot injured, unless such operation not only appears to be but is impracticable.*

When it is necessary to ligate an artery, the surgeon must be guided by his anatomical knowledge, and by the pulsation in finding it. In dilating the wound so as to expose the bleeding mouths, the incisions should be made parallel to the course of the vessel, and sufficiently free to facilitate the search. The dissection is carefully conducted, dividing layer by layer, and avoiding the nerves and veins which always accompanying the large arteries. When the bleeding mouth is so exposed that the origin of the jet of blood is seen, the vessel is transfixed by a tenaculum drawn out and secured as it would be in a stump after amputation.

Where it is impossible to ligate the bleeding vessel at the point wounded, a point should be selected, at which the vessel is comparatively isolated, easily discovered, and free from large collateral branches. *In exposing it make a*

free incision. The common mistake that most surgeons make is a small incision, which hampers the search. When we approach the artery, use the grooved director to isolate those cellular layers in which the vessel is always found The point of the knife should *never* be used for this purpose. The lips of the wound should be drawn asunder by an assistant, so as to give to the operator the light necessary for accomplishing speedily and succeesfully the ligation. In all cases requiring such an operation, it is desirable to to have the patient completely under control, and, therefore, chloroform should be admisistered.

When the artery is found, and the ligature passed under it, before tying it be quite sure that it is vessel, and it alone and not the nerve that has been seized. To be satisfied on this point, it is only necessary to draw slightly upon the thread, and examine above and below to see whether the pulsation has altogether ceased below the ligature. Having determined that the thread is properly placed, it is then firmly tied, the ends are brought out of the wound and secured under a strip of adhesive plaster, attached to the immediate neighborhood of the wound. This mode of disposing of it will protect it from becoming entangled in the ordinary dressing, and be drawn upon when these are daily removed. Water dressings would be the proper after-treatment. The thread will have come away spontaneously, by the eighth, twelfth or sixteenth day, according to the size of the vessel ligated.

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Local treatment of wounds.—Having removed all foreign bodies, and hemorrhage having ceased, the dressing now required should be of the simplest description. It is known that gunshot wounds, favoring the contused variety, show a constant disposition to suppurate and often to slough. *This process of suppuration is not necessary to the healing of the wound, and should be kept in subjection as much as possible.* This is effected by the continued application of cold, which, by keeping down excessive reaction, and keeping out an

excess of blood, diminishes the source of the pus supply, and thus hastens the cure. In former times, suppuration was considered essential in the healing of all wounds, by permitting the escape of so much poisonous matter, which had accumulated in the system, and which must now find a vent, or, if retained, would be considered the satisfactory cause of any sickness which the wounded man may ever suffer from hereafter. The wound was therefore plugged with a lint tent, piles of greasy lint in cushions were applied, and after covering with a sufficient number of compresses and bandages, a forcing bed was formed, which supplied pus to the satisfaction of all interested; and it was common enough to see life drain away from this opening.

This smothering of wounds and smearing on of greasy ointments, which the wounded formerly encountered, was a second enemy, far more fatal than the enemy on the battle field; as in its ranks ranged exhausting suppuration, with its hectic; pyæmia, with its rapid poisoning; hospital gangrene, with its sudden collapse, and erysipelas, with its thousands of victims, broken-down constitutions, tedious convalescence, very protracted cures, and endless pain and annoyance.

How much more rational is the present practice. *Keep away all hot dressings which invite blood to the part.* Vote poultices a curse, and eject the dirty, troublesome application. Guthrie says poultices should not be admitted in a military hospital; they are generally cloaks for negligence, and sure precursors of amputation in all serious injuries. With more recent writers they even meet with less favor.

The only dressing required for wounds, of whatever character, is the water dressing, and it should be used as follows: apply a single thickness of wet linen or cotten cloth over the wound, allowing it to extend over a considerable surface. If possible, cover this with a layer of oiled silk, waxed cloth, or india-rubber tissue. A second layer of cloth or a band secures the two former layers in position, so that they will not be displaced by the motions of the patient in

sleeping. Then, either squeeze cold water frequently upon this outer cloth, which will keep up the low temperature; or what is a much more convenient and less laborious plan, suspend a bucket or some vessel containing water in the neighborhood of the wound, having a narrow slip of cloth, or, what is better, a lamp wick from the suspended vessel to the bandage upon the wounded limb. By capillary attraction, a constant stream of water is carried from the vessel to the dressing, and by its evaporation, robbing the skin of its animal temperature to get a sufficient quantity of heat to convert the water into aqueous vapor, it refrigerates the limb. The advantage of using the oiled silk, waxed cloth, or india-rubber tissue is, that should the water supply accidentally give out in the suspended vessel, the piece of cloth beneath it remains moist upon the wound. The wet cloth absorbs the discharges, and should be changed two or three times a day, it being well understood that they be disturbed as seldom as possible, compatible with cleanliness.

The surgeon should never be in haste to change the cold for warm applications. Should the virtues of a poultice be called into requisition, a soft wet compress covered with oiled silk and secured by a flannel roller or outer compress, is always at hand, and will be found to combine, in a simple form, all the properties of a poultice. It is light, moist, soft, and is kept warm by absorbing animal heat, which the oiled silk and outer compress retains. If we add to these, cleanliness, facility of medication, and the readiness with which an impromptu dressing can be made, we find an array of advantages which excludes all substitutes.

A more effectual mode of keeping down reaction is, by using ice bladders, which are placed upon the india-rubber, waxed or oiled silk covering. These are of very general application, and make the least call upon the personal attention of nurses. *Whenever ice is used, never apply it directly to the skin, but always through the intervention of compresses* which may be made sufficiently thick to accommodate

the application to the sensitiveness of the patient. When possible, these bladders should be india-rubber or gutta-percha. A large supply of these should always be on hand. The animal bladder is a miserable substitute, as it is not only a very dirty application, allowing the water to ooze out and keep the patient constantly wet, but the bladders become very offensive, and are soon destroyed.

Cold water is the only proper and universal antiphlogistic that can be applied to wounds. It has the convenience of always being at hand, it keeps up a uniform action, is clean, simple, cheap, agreeable to the feelings of the patient, easily obtained, easily applied, demands least care from the nurses, who have their hands usually full, and is withal effectual. With the judicious application of the cold the surgeon can defy inflammation. Cold acts by keeping down temperature, constringing vessels, and keeping blood from the parts injured; so that inflammation, which consists in the engorgement of blood-vessels and an excessive supply of blood, cannot get a foothold. Heat, redness, pain and swelling, all depend upon congestion; control the supply of blood to a part, and inflammation is kept in abeyance.

As the advantages of cold water dressing are obtained through the evaporating properties of water, this action may be increased by medicating it with saline substances or alcoholic tinctures. Sugar of lead, sulphate of zinc, tannin, muriate of ammonia or laudanum, spirits of camphor, and, especially, tincture of arnica would be useful adjuvants. Whilst the irrigation is going on, the compresses next the skin may be moistened every three or four hours with any of the above preparations. Should the wounded patient feel chilly, the cold dressing will not be used until reaction has taken place. There are a few persons with whom cold water is not admissible. In all cases the feelings of the patient will be our guide as to the applicability of the remedy. When not grateful and refreshing to the patient, but, on the contrary, the cause of the complaints,

the irrigation must be superseded by a wet compress, covered with oiled silk or a waxed cloth. This will soon attain the temperature of the body, and will keep the parts moist and soft. The dressing requires to be changed twice in twenty-four hours; not that the compress would get dry, for the perspiration from the part which is kept in by the oiled silk would bathe it in a continual and permanent moisture. The object in changing is to get rid of this secretion, which, by decomposing, would irritate the wound.

A question of great moment is, when shall we desist from water applications and change for some more useful or appropriate dressing? According to the present rational views of surgeons, no other dressing is ever required, however serious a wound may be. As long as inflammation threatens, so long is it necessary to prevent engorgements. As long as suppuration is kept up, so long will the efficacy of cold be required to constringe the blood-vessels and control the source of the purulent supply.

* * * *

We have already said that a surgeon is never warranted in cutting down upon an artery and tying it upon suspicion—he must be an eye-witness of the hemorrhage, and see that it cannot be controlled by other means. The ligation of an artery is always a troublesome operation, and from the fear of subsequent mortification, always jeopards the limb, and necessarily with it the life of the patient. This is specially the case in recent wounds, before nature has prepared a collateral circulation, so that the rule which we have laid down is imperative, *never ligate an artery, however large, in which hemorrhage has spontaneously ceased;* and, moreover, that a good compress is usually sufficient, when applied immediately after the receipt of the injury on the battle field, to stop the bleeding even from the largest vessels, when position, quiet, rest, and other prophylactics will prevent its return.

* * * *

This being well understood, we can now explain why

a ligature placed on the upper orifice alone, or on the course of the artery above the injury, should not stop but only temporarily control the hemorrhage. As soon as the collateral circulation above the ligated point is re-established, the lower opening in the vessel remaining as before, hemorrhage must occur, or, if this circulation is not re-established mortification must follow. *The rule is then imperative, ligate both ends of the vessel at the point wounded; this is the only safe course to pursue.* Another strong reason why the ligature should be applied to the wounded ends of the artery is, that there is always some uncertainty as to the vessel injured. The very serious and often fatal operation of ligating the femoral artery has been performed for injury to one of its branches, which had not been suspected until a post-mortem examination revealed the source of bleeding. When the ligature is applied to the bleeding mouths, this accident cannot happen.

The course which should be adopted in the case of an injured artery bleeding, is as follows: After the hemorrhage has been once controlled, through either some carelessnes on the part of the surgeon or restlessness on the part of the patient, getting up to help himself when he had strict orders to the contrary, etc., or perhaps from rough transportation over bad roads, or the sloughing of the wound, hemorrhage re-appears, the limb should be at once bandaged from the extremity upward, making careful, regular pressure, so as to diminish the quantity of circulating fluid. Over the course of the main artery, and for some little distance below the wound, a compress saturated or not with some of the styptic preparations of iron should be firmly secured, the bandaging of the limb extending to one or two inches above the injury. The patient is then to be placed upon his back, the limb elevated and an ice bladder applied over the wound. Absolute quiet should be enjoined, and secured by a large dose of opium.

In many cases, this dressing will bring about the desired object, when assisted by those internal remedies which

control the force of the circulation, as veratrum viride, digitalis, etc. By the use of the compress saturated with per chloride of iron, in connection with absolute rest, I have succeeded in checking secondary hemorrhage from the carotid artery after the escape of the ligature. But should the parts be so situated that this pressure cannot be applied for a sufficiently long time, or should it not control the bleeding, then the proper course is to ligate the mouths of the artery in the wound without further delay. No case of secondary hemorrhage should destroy life by repeated recurrence; a surgeon is very culpable who permits life to ebb away from his grasp. Physicians cannot be too guarded against the delusive attempts at stopping the bleeding after the recurrence of the secondary hemorrhage, it is certain to return and certain to destroy life, as experience repeatedly proves. Every fresh hemorrhage increases the dangers and doubles the risks, *therefore, never neglect ligating after the second hemorrhage.*

You must not be deterred from placing a ligature on the open mouths of an artery in a suppurating wound, on the deeply grounded, but erroneous idea, that the artery has had its coats softened by this process. Practical surgery shows conclusively, that the coats are tough enough to sustain a ligature in a suppurating wound, and therefore the rule should have no exception. *Ligate in the wound under any circumstances, when it is possible.* The swelling and infiltration of tissues, renders the search after the injured artery difficult, but the surgeon, who, looking to the side of humanity, considers it a sacred duty to do everything for the interest of the wounded, must not allow difficulties to interfere with his proper course. Safety lies alone in this operation. The difficulties must be met and overcome.

The following appearances will be observed in the wound, and will assist in the search: After dividing the infiltrated tissues, should the injury have been received over forty-eight hours, particularly if five or six days have intervened,

the ends of the vessel will be found incarcerated in a mass of greenish yellow fibrine which indicates in a remarkable manner their situation. That which conceals the lower mouth of the vessel is always in smaller quantity. When post-mortem examinations are made, a probe introduced into the artery from below would make its appearance at a point under the yellow patch, raising a thin portion as it protrudes; and should the patient have been destroyed by secondary hemorrhage, an opening will usually be found in this pellicle Through the upper portion of the artery the probe would pass down with much more difficulty, owing to a contracted tube plugged with coagulæ—conditions which do not exist in the lower portion. These lymphy, yellowish green spots are, then, our guides after the wound has been freely dilated.

In a surgical operation, especially in ligating arteries, never cramp oneself from the fear of making too large an opening; the error is always on the other side. Having found and ligated the orifices, the water dressing should be continued as before, care being taken not to apply it should the limb become cool and pale. This is not usually the case after secondary hemorrhage, for the return of bleeding indicates a re-established circulation, which the ligature at the bleeding mouths cannot now influence to the injury of the limb. Should it be impossible to find the bleeding mouths, after a long and careful search, then we will be reluctantly compelled to adopt the less satisfactory operation of ligating the artery above the wound; hoping that it may obviate further operation. Often, however, when this last plan has been adopted, a return of the hemorrhage necessitates a second ligature upon some higher point; and should this fail, as is not frequently the case, amputation of the limb will be the only resort to save life. Amputation must be equally resorted to if, after the application of a ligature, the circulation not being re-established, mortification of the limb ensues. In either case amputate

above the seat of the ligature, so as to ensure a supply of blood to the stump for its nutrition.

These are some of the dangers incurred when the surgeon does not adopt the only proper course to stop the trouble at its commencement. Military hospital statistics show heavy mortuary lists where this rule is not recognized and followed. As the ligature acts as a foreign body, and must come away, it is of little importance what is used for that purpose, a strong cotton, flax or silk thread, fulfills all the indications required. When applied, it should not be interfered with until it has either come away of its own accord, or ten or fifteen days have elapsed, when cautious traction might be attempted to hasten its removal.

Silver wire has been spoken of as ligatures for arteries. However well it may answer in fresh wounds where union by the first intention can be obtained, it is quite out of place in suppurating wounds, as when ligatures are applied for controlling secondary hemorrhage.

Punctured wounds made by the bayonet or sabre, require similar treatment. If the history and appearances clearly indicate the character of the wound, there will be no need of probing for imaginary foreign bodies. Such wounds usually bleed more freely than in gunshot. The hemorrhage is susceptible of control by the same means; pressure being preferred to ligation of arteries. The treatment should be cold water dressings,—irrigation preferred. Protect the wound from air if possible, by covering it with adhesive plasters, or collodion, and *dress it as seldom as possible*. *Once* probing of such a wound should satisfy the curiosity of any surgeon. A frequent repetition of this meddlesome surgery must end in mischief, beside the needless pain inflicted upon the wounded man.

Should a bayonet or sabre wound transfix one of the natural cavities, the internal injury may be rapidly fatal from hemorrhage, or the injury inflicted upon the contained organs may, sooner or later, lead to the destruction of the wounded by visceral inflammation. Under ordinary

conditions, when such wounds exist in the extremities, where no large vessels are implicated, they require no special treatment. It is a class of wounds not as frequently met with in military surgery as one would suppose. The newly introduced sabre bayonet, when plunged into the body leaves but little work for the surgeon. Such cases seldom leave the battle field alive.

When the ordinary bayonet has buried itself deeply in a limb, supuration may appear in the march of the wound. Should pus be suspected, and fears exist that it may be pent up under a fascia, it would be necessary to dilate the wound to permit of its free escape. Under no other condition, except for serious hemorrhage, where it is necessary to ligate the open mouth of the bleeding vessel, should a punctured wound made by either sword or bayonet be dilated.

Simple incised wounds, as sabre cuts, will be closed by adhesive plaster (or sutures which are preferable, should there be any tendency to gaping,) to be followed by the cold water dressing. Should the wound be not of a serious character, it may be left even without after-dressing—the little oozing from its edges, when drawn together by straps or sutures, dries into a scab along the line of wound, and excludes air with its pernicious influences. This permits of the remodelling process, and cicatrization is effected without suppuration.

In gunshot wounds, the swelling which shows itself a few hours after the injury has been received, continues increasing until the completion of the third day, when it has attained its acme with commencing suppuration. Should sloughing occur, it will show itself by the sixth or seventh. On the eighth or ninth day, the slough is in most cases separated from the edges of the track of the ball, and in a few days more will have disengaged itself. With the cleansing of the wound, the inflammation gradually subsides, the swelling diminishes, purulent discharge lessens in quantity, and the wound commences contracting. The

middle portion of the track first closes, and with it, the opening of exit, leaving a funnel-shaped canal, which diminishes from day to day, becoming more superficial, until no depth is left to the orifice of entrance, which cicatrizes with a depression, marking distinctly the nature of the injury which has been received. This is the ordinary course which gunshot wounds take when judiciously treated in good constitutions.

The general treatment of such cases consist chiefly in interfering with the general health as little as possible. The commonly prescribed antiphlogistic remedies are, with but few exceptions, not required. The endless list of emetics, purgatives, diuretics, and diaphoretics, to which some European writers still cling with wonderful tenacity, can be dispensed with with benefit.—*Chisolm's Military Surgery.*

Practice of Medicine.

Typhoid Fever.

Outline of Treatment.—As it has been shown that enteric fever presents different grades of severity, so will it appear proper that the treatment should be alike varied to meet the indications of each form. I shall, under this caption, speak of the course of practice I am myself in the habit of employing in each of these forms of the disease.

First. *The Mild Form.*—General bleeding I have very rarely practiced in either form—but three times I believe in the 130 cases. But the local abstraction of blood by cups with me is a frequent practice. They may be applied to the nucha and temples when headache is severe, and upon the bowels when pain and tenderness exist. An emeto-cathartic of calomel and ipecacuanha in the beginning, I am much in favor of, and never omit it unless the bowels are too much purged without medicine. After this I am in the habit of being content with a daily change of the body and bed linen; cups, and poultices to the bowels, when tenderness exists; a draught of effervescing water, composed of citric acid and bicorbonate of potassa, several times during the day; a Dovers powder at night to procure rest, followed by one in the morning, if the bowels are acting too frequently; if not moved naturally every day, an occasional glass of Seidlitz water to influence a regular action; a little spts. nitre. dulc. after the first few days; a cloth dipped in cold water and applied to the forehead, when headache is present; cold water for drinks, but not in two great quantities at a time; the *veratrum viride* to

control the pulse when it runs above 110; occasional drinks of sol. chlor. potash; and the regular allowance of a little food.

Second. *The Intermediate Form.*—In this form, instead of sponging the surface with cold water, tepid water with vinegar, I think is best. Instead of the effervescing water, the *spiritus mindereri* is substituted, in the dose of a half fluidounce every three or four hours. To control the pulse, and thereby prevent damage of important organs, the tr. verat. vir. is to be administered and pushed to the telling point, after which the dose is to be reduced, and its action maintained by its administration in sol. chlor. potash every three or four hours. When there is tenderness on presure over the bowels, free cupping should be employed, not with small cups, but the largest ones to be had, followed by poultices of mush or warm buckwheat cakes, and, if thought advisable, these to be sprinkled with flour of mustard, and made large enough to cover all over the bowels, and applied as often as they become cold, or until pain and tenderness are relieved. It is always best that the bowels should be suffered to remain moderately loose. Two or three discharges a day, I think, are of service, and if these do not take place naturally, some mild laxative should be administered. But should there be too great a looseness of the bowels, which is most commonly the case, they may be restrained by a dose of Dover's powder three or four times a day. It is in this and the subsequent form that the good effects of opium, when administered with due discrimination, are to be witnessed. A favorite formula with me is, tinct. opii., Hoffman's anodyne, *aa* ʒ iij; spts. lavender comp. ʒ ij. Dose, a teaspoonful, given in the morning. For a night dose, six or eight grains of Dover's powder, with the addition of a little sulph. of morphia and camphor pulv.

In many instances the above course of treatment is all that is necessary to conduct the case to an early convalescence. But should it happen that after the tongue has

cleaned and become moist, the diarrhœa and tympanitis diminish, there is a sudden exasperation of these symptoms, the tongue, just rid of its coating, becomes red, smooth, and dry, with an increase of diarrhœa and tympanitis, subsultus tendinum, etc., then opium with camphor should be freely administered. Should there have been no abatement of the symptoms, but a gradual progression toward gravity, and to that condition especially in which there is a dry, brown, or red tongue, the opium and camphor are equally beneficial. For this peculiar condition of enteric fever, as represented by the state of the tongue, other remedies have been highly extolled, and some of them deservedly so. Oil of turpentine and argenti nitras are both capable of effecting much good when properly and timely administered. Of the two articles the oil is entitled to greatest credit. As already said, I have used both articles, and sometimes with marked advantage. For the relief of the same conditions for which the oil and argenti nitras is prescribed, I have also declared my confidence in the efficacy of opium. I repeat, when the condition of the brain will allow of its full employment, it is capable of effecting a most salutary change of these symptoms, and the success of the cases which have passed through my hands, under its influence, has established a confidence I can repose in no other remedy.

Third. *The Malignant Form.*—In this form of the disease our object is to assist nature in her final struggle. In those cases with a red and dry tongue, as they pass into this form, hemorrhage from the bowels not unfrequently follows; and in these cases I continue the opium in as large quantities as the patient can well bear, with a proper proportion of the sugar of lead. For hemorrhage from the gums and nostrils I like the employment of creosote;* this is to be used either by injecting into the nostrils, or pledgets of lint saturated in the solution and plugged into the nostrils;

* Solution prepared by G. W. Carpenter & Co., Phila.

for the arrest of bleeding from the gums it may be taken into the mouth and retained a few minutes, when properly weakened. For the arrest of diarrhœa, opium, alone or with chalk, argenti nitras, and the several vegetable astringents may be employed. If these means fail, injections of quinine and vinegar may be employed, and sometimes its effect is almost magical. If the bowels are not sufficiently evacuated, castor oil or rhubarb (the syrup of the latter is a good preparation) may be used. For the debility which attends this form, tonics and stimulants become absolutely essential; but in the allowance of these, the state of the pulse and the skin must be carefully considered. Washing the surface with brandy and water, and the internal exhibition of carbonate of ammonia, wine, and the sulphate of quinia, are eligible remedies. In some cases I have found it necessary to resort to pure brandy with quinine, and have witnessed the most gratifying results. Throughout this form of the disease the tr. verat. viride, in solution of chlor. potash, should be emyloyed. It is capable of effecting great good, and may be employed in doses of from three to six drops every three or six hours. I have already spoken of the value of opium as a stimulant. When the brain is not involved, it is *multum in parvo*, and in this form of the disease is of signal service. In connection with camphor I have seen it quiet delirium, induce moisture of the surface, reduce the frequency of the pulse, and cause it to increase in volume, and promote gentle sleep, from which indeed the patient awoke "quite a different person." Throughout the entire progress of the case the state of the bowels, as regards tenderness, should not be lost sight of, but wet and dry cupping, as the case may require, with the continued application of the poultices, and now and then the mustard-plaster, should be attended to. Blisters over the bowels I have seen attended with sufficient good to give them importance. For the relief of muscular twitchings valerian has disappointed me less often than any other article of its class. I mean the pow-

dered valerian in teaspoonful-doses every two or three hours. Retention of urine is a common occurrence. The importance of examining into the state of the bladder daily, has already been sufficiently stated. A tendency to the formation of eschars, from pressure, should not be forgotten. The parts exposed to pressure should be frequently washed with brandy, and the position of the patient as often changed. When obstinate delirium or coma exists, I have seen much advantage result from the timely application of a blister to the nape of the neck and the administration of a few blue pills.

In those cases that present the symptoms of malignancy in the beginning, the pulse full and strong, and obvious sanguineous determination to the brain, a moderate quantity of blood may be taken from the arm. But in the majority of such cases that have fallen under my management, I have preferred to trust to the effect of the *cold douche*, and thus far with entire satisfaction. As it is impossible for us to guess correctly the duration of any case of enteric fever, from any symptoms that may present, in the beginning, the general abstraction of blood should be cautiously practiced. But whether we bleed or not, it is important that the bowels should be thoroughly purged. Along with these cases, in the beginning, there is generally a torpid state of the bowels, and requires a larger dose than in the milder forms. In all these cases, if the patient be an adult, I give not less than twenty grains of calomel, followed, in due time, if it does not operate, by a dose of sulphate of magnesia or infusion of senna. During the first few days free cupping on the back of the neck, followed by a blister; if delirium is obstinate, cold applications to the head, a blue pill given at night, followed by a Seidlitz powder in the morning, is the course of practice I usually adopt, after which I omit the mercury and pursue the course of practice before described.—*Treaties on Enteric Fever.*

Bed-Sores.

Prevention and Treatment of Bed-Sores.—When the first blush of unhealthy inflammation makes its appearance (which is indicated by a livid color of the integuments) we should take care that all pressure from the parts be immediately removed. This can be done either by the patient's position being changed, or by the aid of bolsters or air-cushions. M. Purefoi uses a cow's bladder softened in warm water; this being oiled and partially inflated, is placed under the part suffering from continued pressure. The effect of this support (in a case of fractured leg) exceeded his expectations.

What renders this contrivance valuable, is its simplicity and cheapness; it forms a very manageable substitute for the hydrostatic bed of Arnott.

In addition to these preventives, others, to stimulate the surface and excite the dormant capillaries to more healthy action, should be diligently used. The lotion recommended by Sir B. Brodie is admirable for this purpose. It consists of two grains of bichloride of mercury to an ounce of proof spirit. These two contrivances, if used at the same time will be found invaluable in the prevention of bed-sores.

If, in spite of our efforts, sloughing takes place, we may divide the progress of the case, for practical purposes, into three parts. The first is the period before the slough is detached, during which we must employ stimulating applications, as a carrot poultice morning and evening, sprinkled with a solution of chloride of soda. Pressure must also of course, be prevented.

When the slough falls out, a deep, unhealthy-looking ulcer is presented to our notice, forming the second stage of these sores. This ulcer is generally round or oval. The

integuments at the circumference are undermined, so that you can readily pass a spatula beneath them, showing that the subjacent cellular tissue has lost its vitality even to a greater extent than the cuticle. The margin of the ulcer is consequently found to overlap its base. The base presents a flabby, uneven surface without granulations, and interspersed with shreds of adherent slough. From this surface a thin serosanguineous or ichorus discharge is secreted, having a most fœtid odor. In order to promote healthy granulation, and stimulate the parts to cast off the remaining shreds of slough, warm dressings, consisting either of equal parts of gum elemi and spirits of turpentine or of castor oil and Peruvian balsam, may be applied, dipped in lint, to the bottom of the ulcer, and a linseed meal poultice, spongio-piline, or a carrot poultice, placed over them. After a few days, the ulcer will assume a more florid appearance, and show a disposition to form granulations. It will now be necessary to make a change in the dressings.

This should consist in applying every morning with a camel's-hair brush a solution of nitrate of silver (ten grains to an ounce of distilled water) to the flabby granulations, then covering the surface of the ulcer, and filling it up with fine carded cotton. A piece of oiled silk, large enough to cover both hips and sacrum, should then be placed over the dressings. The oiled silk thus applied serves a double purpose; it will, by preventing the evaporation of the discharge, keep the cotton soft, and permit its easy removal at each dressing; it will also add to the cleanliness and comfort of our patient, by preventing the bedclothes being soiled. Under this simple treatment, the surface of the ulcer soon begins to assume a more healthy appearance, the granulations at the margin become amalgamated with those at the base, until the cavity is filled up by luxuriant granulations.

We have now the third stage of these bed-sores to treat. As in the second stage our object was to stimulate the

surface to the healthy action, in this we have to control inordinate action, and repress luxuriant granulations. A concentrated solution of sulphate of copper (applied every morning) will be found most useful for this purpose. The carded cotton and oiled silk, as above recommended, may be also continued until the ulcer is perfectly healed.—*Part* xviii., *p.* 235.

Use of Collodion in Bed-sores.—Air-cushions and water-beds are not obtainable by the poor, and it has been the practice to protect parts subjected to injurious pressure either by powdering them with some inert substance, or covering them with diachylon. The first of these measures is of little use, and the other does more harm than good, as by softening the tissues to which it is applied, it only renders them more susceptible to the influence of pressure, especially if the leather on which it is spread gets into folds. Collodion adheres far more closely than diachylon, and is quite exempt from moisture; and in the cases in which it has been tried in the French hospitals, has answered well.—*Part* xx., *p.* 177.

Bed-sores—Tannate of Lead.—Mr. Leclerc, senior physician of the civil hospitals at Laon, indicates a method which is calculated to prevent mortification over the sacrum. As soon as the skin reddens or becomes painful, he prescribes a layer of tannate of lead in a humid state, to be spread over the threatened part, and the following is the formula for its preparation:

Corticis quercus contusæ, 1 oz.; aquæ, 8 oz.; reduce by boiling to 4 oz.; strain; add liq. plumbi diacetatis q. s. until no further precipitate is formed.

The deposite is collected upon a filter.

Mr. Leclerc asserts that of all the topical remedies which he has used for the treatment of this most troublesome complication of protracted disease, none is preferable to tannate of lead employed as described.—*Part* xxxix., *p.* 232.—*Braithwaite's Retrospect.*

Obstetrics.

Dysmenorrhœa.

Dysmenorrhœa may depend, says Dr. Bennet, on a physical imperfection of the uterine neck; on contraction of the os internum, or of the canal which constitutes the cavity of the cervix. This contraction may be either congenital, or the result of inflammation. The peculiar character of the dysmenorrhœa, when caused by congenital contraction, is the absence of *any* uterine symptom during the interval of menstruation, an intense agonizing pain for a few hours before the flow of blood appears, either then disappearing or lasting throughout the period; these pains commencing with menstruation in early youth. If they are occasioned by inflammation, there are the same symptoms at the time of menstruation, but there is not the same immunity from uterine symptoms in the interval of the catamenia.

The cause of pain experienced under these circumstances is evident. The cavity of the non-pregnant healthy uterus not containing more than about ten or eleven drops of fluid, as soon as the catamenial secretion commences from the lining membrane of the uterine cavity, unless the blood find a free exit through the os internum and the cavity of the cervix, it distends the uterus, and gives rise to great pain. The obstruction may merely be at the os internum, spasmodically contracted; in which case, as soon as it has been overcome, the blood escapes freely, and pain disappears. But if the os internum is permanently contracted, or the contraction exists in the cervical canal, the pain may continue throughout the catemenial period.

A contracted state of the upper part of the cervical canal, or of the os internum, is not, I believe, an unfrequent complication of inflammation of the cervix, from the swelling and hypertrophy of the substance of the organ which it occasions. This remark, however, does not apply to the *inflamed region* of the cervical canal, which is uniformly dilated by the existence of inflammation.

It appears to me that a free communication between the cervical and uterine cavities, allowing the *easy* introduction of the uterine sound, is generally an anomalous condition, indicating the existence of disease, unless observed soon after menstruation, when the os internum relaxes, or soon after parturition, when it has not yet had time to recover its normally contracted state. The principal morbid conditions in which I have observed a free communication between the two cavities, are inflammation and uterine tumors. If the inflammation which exists at the os uteri, and in the lower part of the cervical cavity, ascends as far as the os internum, it appears to relax the muscular contractillity of that region. The os internum is always open when the inflammation passes into the uterine cavity, and implicates its lining membrane. The same effect is also produced by the development of the uterine cavity, through the formation of tumors in the substance of the uterus, or from any other cause, the os internum gradually opening as the uterus enlarges, probably by the same mechanism as in pregnancy. This is so generally the case, that the fact of the uterine sound penetrating easily through the os internum into an enlarged uterine cavity, may be considered a valuable symptom of the existence of such tumors, to add to those with which we are already acquainted.

Extreme dysmenorrhœa from congenital contraction of the cervical canal and os internum, independent of inflammation, is, I believe, of *rare occurrence*. This is a fortunate circumstance, as it is most embarrassing to treat, requiring an amount of interference with the uterine organs which it is very painful to have to propose to an unmarried female.

Dilatation of the contracted cervical canal is, however, sometimes the only means we have of remedying an amount of suffering at the catamenial period, so extreme as to render life nearly a burden, and as to react deeply on the general health.

Whatever may be the cause of dysmenorrhœa, the mode in which the menstrual secretion takes place is modified by its existence: instead of a flow of bright blood, regular and continuous, although generally increasing by exercise and diminishing by rest, we have a dark, interrupted, clotted discharge. After severe uterine pains, which may last many hours, and are often accompanied by tenderness and swelling in the ovarian regions, and pain in the back and down the thighs, more or less dark clotted blood is thrown out. Its expulsion is generally followed by relief, and by a freer flow for a while, when it again diminishes, and the same ordeal again takes place. Sometimes the interruption will be complete for one, two, or three days, the pains subsiding with the menstrual flux, and returning when it again makes its appearance. The venous condition of the menstrual secretion shows plainly that either from inflammation, congestion, or some other cause, the uterine circulation is defective, the blood stagnating in the vessels of the uterus, remaining in its cavity, and distending it after it has been secreted.

Treatment.—Constitutional dysmenorrhœa may be palliated in its attacks, and can seldom be removed by medical treatment. A great deal of subsequent uterine disease would, however, be spared to those young females who unfortunately present it, were mothers more generally aware that its existence constitutes throughout life a strong predisposition to uterine inflammation, and that they cannot take too great care of such of their daughters as suffer from it. For such young females, the discipline of public schools may be said to be nearly always too severe, and often to lay the foundation for much future physical and mental misery. That this must be

the case, will be easily understood when we reflect that the domestic treatment of this form of dysmenorrhœa consist principally in *rest* and *warmth*. Females who suffer habitually from dysmenorrhœa, whatever their age, should remain quietly at home, taking care to preserve themselves from atmospheric vicissitudes during the first day or two of menstruation, which is the period during which the pain is mostly felt. A warm hip-bath will often be found useful. If the pains are very decided, it is even best to confine the sufferer to bed, and to apply warm linseed poultices to the lower abdominal region—a valuable and simple mode of soothing pain.

Although this is frequently a symptom of uterine disease, we are often obliged to treat it as the chief disease. If warmth and rest fail, inject from 15 to 20 minims of laudanum, mixed with a little warm water, into the rectum: this is of more value than double the quantity by the mouth, and its disagreeable effects are avoided. If the first injection fails, or is not retained, a second, half an hour later, will be more successful. Chloroform, either inhaled or given in doses of 30 or 40 minims, mixed with mucilage or camphor, which favors its solution in water, is sometimes of use, though not so valuable as opiates.

It is the fact of dysmenorrhœa being so frequently caused by inflammatory disease, that explains the success which often attends blood-letting, both general and local, and which has induced so many authors to recommend it, although unaware of the pathological state which it relieves. General blood-letting acts by revulsion; whilst local blood-letting directly relieves the congested and embarrassed abdominal circulation. I seldom, if ever, resort to general bleeding in dysmenorrhœa.

A few leeches applied to the groin, or, better still, to the neck of the uterus, when possible, if the dicharge is scanty or temporarily arrested, is much more likely to mitigate the pain, and with less loss to the economy. Purgatives, which are frequently useful, act in the same way as leeches.

by depleting the abdominal circulation. Some authors, amongst others Dr. Gooch, have considered dysmenorrhœa to be frequently akin to rheumatism, and have recommended colchicum, guaiacum, and other medicines usually given in rheumatic affections. That the uterus may be the seat of such an affection, is undeniable; but I am persuaded that its frequency has been greatly exaggerated, as likewise that of irritable uterus. Indeed these two conditions may be said to have been, to a great extent, mere theoretical creations, destined to account for pathological conditions, the real nature and meaning of which have, until recently, been a mystery to the profession.—*Part* xxv., *p.* 294.—*Braithwaite's Retrospect.*

Puerperal Fever—Turpentine.

On a former occasion, Dr. Copeman, of the Norfolk and Norwich Hospital, recounted twenty-one cases of puerperal fever, for the purpose of showing that turpentine is more to be relied upon in this affection than any other remedy. On the present occasion, he records the history of thirty-six additional cases, in which the same plan of treatment was carried out with the same results. All these cases, new and old, were attended in consultation, and therefore it may be supposed that they presented some difficulties which induced the medical attendants and the friends to seek for further advice; and yet of the total number of fifty-seven, thirty-eight recovered, and only nineteen died. With such a result, without reading the cases, it might well be questioned whether the cases were really instances of

puerperal fever; but after reading them, such questioning is out of place. In all the cases, indeed, we find rigor, abdominal or uterine pain, uneasiness or tenderness, rapid pulse, disordered sensorium, tympanitic body, depraved lochial secretion—symptoms abundantly sufficient to show what was the matter.

The turpentine is given by draught (one drachm for a dose) or enema, or in both ways at once, and it is also applied as stupes to the abdomen. Simple water, or brandy and water, is recommended as the vehicle by which it may be most conveniently introduced into the stomach.—*Ranking's Ab., No.* 32.—*Summary of Med. Sci.*

Therapeutics.

Indigenous Remedies of the Southern Confederacy which may be Employed in the Treatment of Malarial Fever.

BY JOSEPH JONES, M. D.

Professor of Medical Chemistry in the Medical College of Georgia, and Chemist to the Cotton Planters' Convention of Georgia.

With our ports blockaded, and all commercial intercourse cut off with those foreign countries and American States from whence the South has received her supplies of medicine, it is important, and we may say absolutely necessary that the indigenous remedies of the Southern Confederacy should be carefully examined and employed. This examination and employment of Southern remedies should be commenced by the physicians not as a temporary expedient, but as a permanent advance in the establishment of our absolute independence. To facilitate this important object, we propose to pass in review the various remedies which may be employed in the treatment of the most common and important Southern diseases, reserving in the chemical analyses, physiological and therapeutic experiments, with these and other remedies, for subsequent papers.

GEORGIA BARK (PINCKNEYA* PUBENS) MICHAUX.

Botanical Characters.—Capsule two celled, bearing the partition in the middle of the valves. Corrolla Tubular. Calyx, with one or two segments resembling bracteas. Filaments inserted at the base of the tube. Seed winged.

*Consecrated by the Elder Michaux, in testimony of his gratitude and respect, to Charles Cotesworth Pinckney, of South Carolina, an enlight-

A large shrub, 15–20 feet high, with many stems from each root; branches branchiate; the younger tomentose. Leaves opposite, large, lanceolate, entire, slightly acuminate, shining on the upper surface, though sprinkled with hairs, tomentose on the lower; petiole about an inch long, tomentose. Panicles terminal and axillary, composed of fascicles, commonly 5 flowered. Calyx superior, 5 parted; persistent, slightly colored; segments sometimes equal, lanceolate and acuminate; frequently one and sometimes two segments dilate into a large, ovate, veiny, rose-colored leaf; when two segments dilate they are never equal in size. Corrolla tubular; the tube of an obscure green color, tomentose; border 5 parted; segments oval, obtuse, purple. Filaments inserted into the base of the corolla, longer than the tube. Anthers incumbent, two celled. Germ turbinate. Style shorter than the stamens. Stigma obtuse. Capsule nearly globose, opening at the summit across the dissepiment. Seeds flat, orbicular, attached to a central receptacle. This genus is very nearly allied to cinchona. It differs in its calyx, but principally by the transverse partition of its capsule. Flowers May and June.—Elliott. A sketch of the Botany of South Carolina and Georgia, vol. 1. p. 268.

Geographical Distribution.—This small tree, interesting not only for the elegance of its flowers and foilage, but also for its close affinity to the celebrated genus Cinchona, which yields the Peruvian bark, and for the valuable medicinal properties of its bark is indigenous and confined to the most southern parts of the Southern Confederacy. It grows in wet and boggy soils, along the small streams which intersperse the pine barrens, from New River, South Carolina, along the sea coast into Florida. I have found it in great-

ened patron of the arts and sciences, from whom Michaux received multiplied proofs of benevolence and esteem during his residence in South Carolina. First discovered by Bartram, who considered it a species of Mussenda. Found for the first time by the elder Michaux, in 1701, on the banks of the St. Marys.

est abundance in the "branches" of Walthourville in Liberty county, where it is found in company with the elegant Buckwheat Tree (Mylocarium ligustrinum Pursh,) several of Andromeda, (Andromeda Angustifolia Pursh) A. Catesbæi, Walt. A. acuminata,) Hypericum fasiculatum, Poison bush, (Rhus vernix,) Tupelo (Nyssa aquatica and N. grandidenta) Black Gum Nyssa) sylvatica,) Red Maple, (Acer rubrum,) Cypress (Cupressus desticha,) Small Magnolia or White Bay, (Magnolia glauca, Loblolly Bay, (Gordonnia lasyanthus,) Red Bay, (Laurus Caroliniensis,) Sweet Gum,) Liquidambar styraciflua) and Water Oak, (Quercus aquatica.) The branches which intersect the Pine-barrens of Georgia are capable of supplying large quantities of this important medical plant, and with care and assistance of cultivation, they might be made to yield sufficient bark to supply the entire Confederacy. If this plant fulfills its high promise, these barren and now valueless regions of country, will yield one of the most valuable remedies.

Chemical and Therapeutic Properties.—The inner bark of the Pinckneya pubens is extremely bitter and appears to partake of the febrifuge virtues of the Peruvian bark. Mr. Farr, an able chemist of Philadelphia, many years ago instituted an analysis of this bark, which although by unforseen accidents was not as satisfactory as he would have wished it, still led to the discovery of a crystalized substance which resembled Cinchona. Previous to the extensive introduction of Bark and Quinine, the inhabitants of Georgia and Carolina employed it successfully in the treatment of intermittent fevers.

Mr. John Stevens Law,* of Sunbury, Georgia, in his Thesis for the Degree of Doctor of Medicine, presented to the Faculty of the University of Pennsylvania in the spring of 1825, states that he was induced to try it in intermittent

* The American Dispensatory, by John Redman Coxe, M. D.: Philadelphia, 1830, p. 499.

fever, from the estimation in which it was held by some of the inhabitants of the neighborhood where he resided.

Mr. Law used it in seven cases of intermittent fever, six of which were very speedily cured by it. He affirms that in no case did it distress much the stomach, though in two cases it was given in the quantity of ʒ i at a dose, after the custom of the West Indian physicians.

This bark may be administered in powder, in doses varying from ʒ i to ʒ i, according to the severity of the case; it may also be administered in infusion or decoction. Michaux* states that the inhabitants were accustomed to boil a handful of the bark in a quart of water till the liquid was reduced to one-half, and to administer this decoction to the sick.

The facts now presented, with reference to this interesting vegetable, which so closely resembles the celebrated Peruvian Bark, that it has by several distinguished botanists been referred to the same genus, are sufficient to excite, but by no means to satisfy inquiry; and we sincerely hope that physicians will make extensive examinations and trials, in practice, with this Georgia Bark, which, aside from the reputation which it formerly held in the cure of malarial fever, promises so much for its botannical connections.

DOGWOOD (CORNUS FLORIDA.) LINN.

Bottonnical Characters.—Arborescent; leaves ovate, acuminate; involucrum large, obcordate; drupes ovate.

A tree 15–25 feet high, the trunk 8–10 inches diameter, with expanding branches, the smaller crowded at the extremeties of the older.

Wood, fine grained, hard, durable. Leaves opposite, deciduous, ovate-lanceolate, acuminate, entire, ribbed; the younger ones very pubescent, almost villous on the under surface. Flowers in terminal heads. Involucrum four-

* North American, Sylva, vol. 1, p. 181., Philadelphia, 1857.

leaved; leaves large, obcordate, nerved, white; the sinus callous, sessile at the base of each head, and enclosing it before the time of flowering. Calyx one-leaved, small, tubular, border four-cleft; segments erect, obtuse, shorter than the tube. *Petals* 4, linear-lanceolate, inserted into the summit of the germ, yellowish. *Filaments* 4, as long as the corolla, alternating with the petals. *Anthers* incumbent, two lobed. Germ inferior, slightly angled. Style shorter than the stamens, surrounded at base by a glandular ring, round which the petals and filaments are inserted. Stigma capitate. Drupe red. Flowers March, April.—Elliot. Sketch of Botany of South Carolina and Georgia, vol. 1. pp. 207–208.

Geographical Distribution.—The Cornus Florida is first seen in Massachusetts, between the 42d and 43d degrees of latitude, and extends uninterruptedly throughout the eastern, southern and western states to the bank of the Mississippi. Although abounding especially in the Middle States, it is, nevertheless, one of the most common trees over this vast extent of country. In New Jersey, Pennsylvania, Maryland and Virginia, it abounds upon moist, gravelly and uneven soil, in North Carolina, South Carolina, Georgia, Florida and Alabama, it is generally found more abundantly and most luxuriant on the borders of swamps and low-grounds, and scarcely ever in the pine barrens, where the soil is too dry and sandy to sustain any but the long leaf Pine, (Pinus Australis,) the Barrens Scrub Oak (Quercus) Catesbæi, Upland Willow Oak, (Quercus cinerea,) Black Jack Oak, (Quercus ferruginea,) and Running Oak, (Quercus pumila.)

In the most fertile districts of West Tennessee and Kentucky it is said not to appear in the forest, except where the soil is gravelly and of middling quality.

Chemical Composition.—The bark of the root, stem and branches of the Cornus Florida is a powerful bitter possessing a bitter astringent and slightly aromatic taste. The chemical composition of this bark appears to have been

first investigated by Dr. Walker, of Virginia, who published his observations in 1803 in Philadelphia.* He found that water distilled from the bark in powder had a transparent, whitish appearance, with a slight aromatic odor, and no perceptible taste; when the heat was increased the fluid had a lemon color, with an unpleasant smell, and an acerb taste effects which were probably caused by the volatilization and partial decomposition of portions of the bark in consequence of the continuance of the heat until the mixture was evaporated nearly to dryness.

Dr. Walker also endeavored to ascertain the effects of different menstrua upon the extract furnished by evaporating a decoction of the root of Cornus Florida. Strong alcohol dissolved from the extract, three-fourths of the entire quantity; the part which remained undissolved was destitute of taste, and underwent no change of color on adding the test of iron; the alcohol which contained the dissolved portion of the extract possessed an intensely bitter taste with astringency, presented a clear red color, and turned to a deep black on the addition of a salt of iron. When the alcoholic extract was macerated in repeated portions of sulphuric ether, with a view to ascertain the quantity of resin, the ether acquired a dark color and a bitter taste, and dissolved three-quarters of the extract. When tested with iron, it was found that the remaining quarter, only, was changed to a black color.†

Upon this examination, Dr. Walker announced that the Dogwood contained gum, resin, tannin and gallic acid.

Mr. G. W. Carpenter, of Philadelphia,‡ subsequently

* Experimental inquiry into the similarity in nature between the Cornus Florida and Sericea, and the Cinchona Officinalis of Linnæus, &c., &c., by Dr. John M. Walker. Philadelphia, 1803.

†Dr. Walker gives a receipt for making an excellent ink, in which the bark of the Cornus Florida is substituted for gall nuts.

Put half an ounce of dogwood bark, two scruples of sulphate of iron, and two scruples of gum arabic in sixteen ounces of rain water, during the infusion shake it repeatedly.

‡Essays on some of the most important articles of the Materia Medica, &c. By G. W. Carpenter. Philadelphia, 1804, p. 202.

announced the discovery of a peculiar bitter principal for which he proposed the name Cornine, and which he asserted to be the active alkaloid principal of the Cornus Florida, and to be fully equal, if not superior to quinine in its tonic and febrifuge properties.

In consequence, however, of yielding this salt in so very minute comparative proportion to what the Quinine is yielded by the Cinchona, it is even more expensive than the latter. It is greatly to be regretted that Mr. Carpenter did not publish the method by which he extracted the alkaloid principle. Some have gone so far as to affirm that he did not discover any alkaloid principle at all, because subsequent investigations have failed to detect Cornine. We consider this criticism severe, for three reasons.

1st. No absolutely accurate and complete examination of the bark of the Cornus Florida has yet been made.

2d. As Mr. Carpenter did not state his method of obtaining the active principle, it might be supposed that the agents used exerted some influence in the transformation as well as the separation of the alkaloid principle.

3d. Mr. Carpenter affirms that he submitted Cornine to the examination of several physicians. This subject is of so much interest and importance that we quote the entire passage from the work of Mr. Carpenter:

"It gives me much pleasure to announce the discovery which I made of an alkalin base in the Cornus Florida, which I have denominated Cornine, and which with acids, form neutral salts, the sulphate of which has proved a highly valuable tonic and febrifuge. This article has been very carefully and accurately described by Dr. Samuel G. Morton, of this city, in the Philadelphia Journal of the *Medical and Physical Sciences*, and from the most respectable sources in the medical profession, from various parts of the United States, where this article has been sent, the most corroborating evidences have been received of the unequivocal success of the Cornine in the treatment of remittent and intermittent fevers, in the same doses as the quinine,

and the only circumstance which precludes its competition with that substance, is the minute comparative proportion of Cornine yielded by the Cornus Florida. If, however, at any time, we should fail in our supplies of Cinchona, which is not impossible, or even improbable, we shall then be able to supply its place by this principle of the Cornus Florida." Essays on the most important articles of the Materia Medica, &c. p. 203.

Dr. S. G. Morton,* of Philadelphia, described Cornine as a greyish-white powder, extremely bitter and deliquescent when exposed to the air, and affirmed that he had exhibited it in some cases of intermittent fever with much success. Dr. Morton considered it to be in no respect inferior to quinine. Dr. R. Coates, and several other practitioners, exhibited this salt in the same cases in which quinine is employed, and with decided success.

Cornia, according to Mr. Carpenter, does not crystalize but forms on evaporation a viscid mass. It is of a pale, straw color, attracts the moisture of the atmosphere, and dissolves in alcohol, and in sulphuric, acetic and muriatic acids, with which it forms crystallizable, neutral salts. The Sulphate crystallizes in acicular or needle-like cystals, deliquescent, and consequently soluble in water, or of a greyish-white color, and its taste is intensely bitter. According to the testimony of Joseph Tongo,† M. D. and E. Durand, of Philadelphia, Dr. Staples obtained it by digesting the bark of the root of the Cornus Florida in alcohol of 30 deg. of Baume's areometer. After several days had elapsed, the latter was filtered and concentrated by distillation in water bath. On cooling, a granular extract was obtained, of a light pink color, of a very bitter and astringent taste; when treated with diluted sulphuric acid,

* Philadelphia. Journal Medical and Physical Sciences.

†A Manual of Materia Medica and Pharmacy, comprising a concise description of the articles used in Medicine by H. M. Edwards, M. D., and P. Vavasseur, M. D. Translated from the French by Joseph Tongo, M. D., and E. Durand, Philadelphia. 1829.

afforded a very small quantity of cystals of Sulphate of Cornia, without having been exhausted of all its bitterness and astringency.

Mr. Ellis states that Dr. S. Jackson, lately of Northumberland, Pa., informed him that he had subjected the bark to Henri's process for obtaining Quinia from Cinchona, and that without carrying the process so far as to obtain a cystalline salt, he used the concentrated alcoholic solution with the most decisive results, and was satisfied that it contained a principle analogous to Quinia.

Mr. James Cockburn examined the Cornus Florida in 1835, with the following results:

The decoction, which was of a bright red color, and slight mucilaginous appearance, formed a precipitate with a solution of subacetate of lead, which consisted of gum, coloring matter, and other foreign substances. A precipitate was also formed with pure alcohol.

Upon the addition of water to the tincture, concentrated by evaporation, it threw down a curdy precipitate, which upon examination, was found to be resin.

The decoction and tincture, redden litmus paper, and cause a yellowish precipitate in a solution of gelatine, and one of a dark olive green in a solution of sulphate of iron. They also afford precipitates with sulphuric and muriatic acids, lime water, alumina, the carbonates of ammonia and potassa, tartrate of antimony and potassa. The color becomes lighter on the addition of nitric acid; milky by the corrosive chloride of mercury, and has its color deepened by ammonia.

A portion of the bark was digested in sulphuric ether for a few days and filtered.

The etherial tincture was of a lemon color and reddened litmus paper, and on evaporation deposited on the sides of the vessel a fatty matter, insoluble in water, but soluble in alcohol, leaving a greasy stain on paper; besides this there was a compound of oil and resin combined with coloring matter, and a substance of a light brown color, very bitter

taste, friable and very regular appearance, supposed to be a compound of a peculiar bitter principle, with tannin and other matters. This was dissolved in alcohol and formed a beautiful red-colored tincture, which reddened litmus paper. Lime was then added, boiled, filtered and evaporated; a substance resembling the etherial residue remained, interspersed with small, shining acicular crystals, of a bitter taste, which property I am disposed to believe they owed to the bitter extract with which they were associated. The bark used in the last experiment was submitted to the action of boiling ether, which, on cooling, deposited a substance of the consistence of wax, which it resembled in all its properties.

Two ounces of the bark coarsely powdered were introduced into ʒ viij of alcohol and exposed to a temperature of from 105 to 120 degrees F. The alcohol was then decanted and a fresh portion added and treated as before. The liquors were united and a solution of sub-acetate of lead added to separate the coloring matter; after the insoluble portion subsided, the clear liquor was separated, a little sulphuric acid was then added to the solution to separate any excess of sub-acetate of lead. This was filtered, and the alcohol distilled off. There remained in the retort an oily-like substance, together with a principle of a dirty, white color, curdled appearance, resembling the residue of the etherial tincture. Ammonia was then added to the liquor to precipitate any principle remaining in solution. The residue was then treated with a little sulphuric acid, water and animal charcoal, (previously treated with muriatic acid, which, upon evaporation, deposited an abundant crystalline mass of a flaky appearance, resembling at first sulphate of quinine, but on cooling, assumed a feathery appearance, with a sharp saline taste, soluble in hot and cold water, insoluble in alcohol and ether, soluble in nitric acid, and resembles sulphate of ammonia in all its properties.

One pound of coarsly powdered bark was boiled for half

an hour in one gallon of water, accidulated with ʒ iss sulphuric acid. The tincture was poured off, and treated with animal charcoal, and when evaporated, left a brown extract of a resinous, waxy appearance and very bitter taste, which appeared to have very much the flavor of Peruvian bark; this was again treated with animal charcoal, and left, on evaporation, a crystalline mass in an impure form, which was slightly soluble in alcohol, almost insoluble in ether, but very soluble in nitric acid. The alcoholic solution was evaporated, and left crystals of a very fine, long, flexible and silky appearance; which crystals decomposed when thrown upon red coals, and did not form a precipitate with oxalate of ammonia, but were without taste.

The bitterness was entirely owing to the bitter extract which was slightly soluble in water, soluble in alcohol, but nearly insoluble in ether. This I propose to call bitter extractive, and in this I am inclined to believe the active principle resides.

A concentrated tincture yielded by evaporation a dark brown extract, slightly soluble in water, soluble in alcohol and ether, bitter aromatic taste, possessing the properties resin. Both this and the watery extract possessed the sensible properties of the bark in a concentrated form.

There is a red coloring principle in this bark, taken up very feebly by alcohol and ether, but less so by water, and has its color rendered deeper by an alkali.

One thousand grains of the bark yielded by incineration a product weighing sixty-five grains: this residue was submitted to the action of boiling water, and concentrated by evaporation; it then had an alkaline taste, effervesced strongly with acids, and restored the blue color to litmus, previously reddened by an acid; it was then neutralized with nitric acid, and upon evaporation yielded crystals of nitrate of potassa.

The insoluble residue of the preceding experiment was dissolved by nitric acid, (with the exception of a minute portion of carbonaceous matter) with violent effervescence;

the colorless solution thus obtained, threw down a white precipitate, on the addition of oxalate of ammonia, and a deep blue one with ferrocyanate of potassa. It produced also a dark green or black, with tincture of galls. Carbonate of soda when added to the solution, caused a white flocculent precipitate. On adding a solution of phosphate of soda, no change was immediately produced, which led to the belief that a salt of magnesia was present.

From the result of these few and imperfect experiments, we may venture to enumerate the following as among the principal constituents of the Cornus Florida.

1, Gum; 2, Resin; 3, Tannin; 4, Gallic Acid; 5, Oil; 6, Fatty Matter; 7, a Crystalline substance; 8, Bitter Extractive; 9, Wax; 10, red coloring matter; 11, Lignin; 12, Potassa; 13, Iron. To which may be added, Salts of Lime and Magnesia. Cornus Florida, by James Cockburn, Jr. Extract from Thesis. Phil. Coll. of Pharm. American Journal of Pharmacy, July, 1835, new series, vol. 1. pp. 109–114.

Dr. C. D. O'Keeffe, whilst a student of medicine in the Medical College of Georgia, published a valuable article on the chemical constitution and febrifuge properties of Dogwood Bark; in which he states that with the assistance of Dr. Robert Campbell, he had determined upon and conducted the following process for obtaining Cornine:

Pulverize two ounces of the well-dried bark of the root; separate its tannin with sulphuric ether, and filter. Macerate the separated bark in alcohol for two days, to extract the resin and cornine. Pour off the alcohol, and precipitate the *cornine* from the liquor with a solution of sub-acetate of lead. Separate the sub-acetate of lead from the solution by passing a current of sulphuretted hydrogen gas through it. Filter and evaporate the fluid down to the *cornine*.

This substance is possesed of decided acid properties, having a well-marked acid reaction; it is of a dark straw

color, very bitter and astringent. Southern *Medical and Surgical Journal*, January, 1849, p. 6–7.

Dr. O'Keeffee cites the testimony of Prof. Geiger of Heidleberg, as confirmatory of the results of his examination as the acid properties of *cornine*.

It is evident from the discrepancies in the statements and views of these various observers, that the analyses of Dogwood, thus far published, are not sufficiently thorough and accurate, and that the profession needs more extended and definite information with reference to the chemical and physical properties of this valuable indigenous plant.

Medical Properties and Uses.—The bark of the Dogwood has been known and successfully used in the treatment of intermittent fever for more than one hundred years.

Upon the human body the bark of the Cornus Florida acts as a tonic, astringent and antiperiodic, and resembles in its general effects Peruvian bark. Dr. Walker by numerous experiments with it upon the healthy system, determined that it uniformly increased the force and frequency of the pulse, and augmented the heat of the body. He instituted collateral experiments with the Peruvian bark, and found that both its internal and external effects agreed with those of the Cornus.

Dr. Gregg, of Bristol, Pennsylvania, states that after employing the Cornus Florida for nearly twenty-three years in the treatment of intermittents, he was satisfied that it was not inferior to Peruvian bark; and that he had found it uniformly beneficial as a tonic in cases of debility. Among the number of cures by this medicine was that of his own case. Dr. Gregg estimated thirty-five grains of it equal to thirty grains of Peruvian bark; and observed that the only inconvenience accompanying its use was, that if taken within a year after being stripped from the tree, it sometimes occasioned acute pains in the bowels; but this evil was remedied by adding to it five grains of Virginia Snake Root. (Aristolochia serpenta-

ria.) He recommends the bark as being in the best state after it has been dried a year.

In an intermittent fever which prevailed many years ago in West Jersey, it is said to have proved, generally speaking, more beneficial than Peruvian bark.

Drs. Jacob Bigelow, S. G. Morton, R. Coates and many other medical men have employed this bark with advantage in intermittents and in debilitated states of the system, accompanied with loss of appetite and indigestion.

I have myself used it with good success in the treatment of our climate fevers.

In the southern part of Georgia I have known the planters to employ it extensively amongst their people in combination with Wild Cherry bark and Wild Horehound, (Eupatorium pilosum,) not only in the treatment of intermittent fever, but also in colds and dropsies, and in all cases of debility, accompanied with loss of appetite and indigestion.

Dr. B. S. Barton states that a decoction of the Dogwood bark was found very useful in a malignant disorder of horses, called "yellow water."

Dr. D. C. O'Keeffe, in the articles previously referred to, gives an interesting account of the physiological as well as the therapeutic action of the extract of dogwood, and supports his views by fifteen accurately detailed cases of intermittent fever.

In order to ascertain with precision the effects of large doses of the extract on the system in a physiological state, Dr. O'Keeffe instituted the following experiment upon himself.

10 A. M. First dose 30 grains ext.; pulse previous to taking it, 72.

11 A. M. Second dose, 30 grains; pulse intermittent, 72–76; temperature of surface somewhat augmented; general perspiration; a sense of fullness and slight dull pain over the frontal eminence, much increased on flexing the head forward and downward; uneasy feelings in the stomach and bowels.

12 M. Third dose 30 grains; pulse 76, not intermittent

but somewhat depressed ; sensation in the head uniform. On taking this dose a sense of warmth was felt in the stomach, and radiated over the surface of the trunk.

1 P. M. Fourth dose 30 grains ; pulse 76 and regular ; pain in the head augmented, and extended down the forehead to the eye-lids, with a disposition to sleep ; slight oppression in the precordia.

Eating dinner neither mitigated nor heightened the dull headache, which continued the same throughout the day ; at night, tendency to sleep much more urgent—retired early, slept well during the night, and arose in the morning free from any uneasy sensation whatever.—*Southern Med. and Surgical Journal*, Jan. 1849, pp. 10–11.

The discrepances between the effects observed by Dr. O'Keeffe and Dr. Walker may have been due to the fact that the former used the extract and the latter the bark ; be this as it may, it is nevertheless true that the profession needs an extended series of experiments upon the action of the various preparations and constituents of the Cornus Florida. Until these data are supplied itwould be worse than useless to attempt any critical analysis and description of its physiological effects.

Dr. O'Keeffe not only substitutes the testimony of various physicians to the great value of Dogwood in the treatment of malarial fever, but he also establishes the fact that the extract has no tendency whatever to disturb the stomach and bowels. This is important, for the alledged tendency of the Cornus to disturb the stomach and bowels mentioned by so many writers, has exerted no little influence in causing this valuable remedy to remain neglected.

According to Mr. Carpenter the Cornus Florida yields a beautiful extract resembling very closely that of Cinchona, differing, however, in its sensible character, from the extract of the superior species of Peruvian bark, by being less bitter and more astringent.

The following is the most eligible mode for preparing this extract :—Evaporate in a sand or water-bath a tincture of the bark made by digesting it in proof-spirits in the

proportion of two ounces of the former to a pint of the latter, suffering it to stand for at least a week before straining; occasionally during this time submitting it for a few hours to a moderate heat, and thereby facilitating the solution. This extract, from its most prominent and sensible characters, is unquestionably much more active than the common extract of Carthagena bark, and is a preparation admirably adapted, in all cases, where the Cornus may be employed with advantage; and in consequence of being a concentrated preparation separated from the ligneous and insoluble portions, and containing less gum and mucus matter, (which constitutes so large a portion,) is certainly much preferable to the crude substance, and no doubt will be resorted to by many country practitioners as a useful expedient, particularly in those places where this article is in profusion, and where bark of a good quality is frequently very scarce, and sometimes even unknown.—Essays on Materia Medica, &c., by W. P. Carpenter, pp. 203–204.

The extract thus prepared has been exhibited with success by several practitioners in the same doses as the alcoholic extract of Cinchona.

Dose of Extract of Cornus Florida from gr. x. to ʒ ij. repeated as often as the case demands.

Dose in powder from 20 to 30 grains, to be repeated according to the circumstances. It may also be given in decoction, made with an ounce of the bark to the pint of the water, of which the dose is from an ounce to two ounces.

In some parts of the country the ripe berries infused in brandy, have been used as bitters; and the infusion of the flowers are said to form a good substitute for chamomile tea. A decoction of buds and twigs has been thought to agree better with weak stomachs than the preparations.

CORNUS CIRCINATA. WILD. (ROUND LEAF DOGWOOD,) AND CORNUS SERICEA. WILD. (SWAMP DOGWOOD.)

The ten species of Cornus, indigenous to the United States and Southern Confederacy, are all supposed to pos-

sess similar medical properties. With the exception of the Cornus Florida the two under consideration have been most carefully investigated. Our knowledge, however, of both their chemical and medical properties is not only more imperfect than that of the Cornus Florida, but is vague and meagre. Professor Morson and Dr. Ives appear to have been the first to introduce the Cornus Circinata into the medical practice. They recommend it very highly for its astringent and tonic properties, and affirm that they have successfully used it in intermittent fevers and dysentery. Mr. Carpenter announced that the alkaloid principle, Cornine, exists also in this species of Cornus.

The alcoholic extract appears to be the most eligible mode of using this article. The extract is prepared in the same manner with that of the Cornus Florida, it possesses more astringency and is therefore better adapted to the treatment of dysentery. As this plant appears to be rare in most of the Southern States, it is not likely that it will ever be extensively employed, especially as the Cornus Florida is not only more abundant but also fully as efficient. The bark of the Cornus Sericea (Swamp Dogwood,) was found by Dr. Walker to be equal to that of the Cornus Florida, and but little inferior to the common pale Peruvian bark, in the treatment of intermittents. It forms a beautiful tincture with proof spirits.

As the Swamp Dogwood inhabitants the North American continent from Canada to Florida, growing in moist woods, in swamps, and on the borders of streams, especially in the mountains, it is well worth the attention of the physicians of the Southern Confederacy.

The doses and modes of preparation and administration are the same with those of the Cornus Florida.

PERSIMMOM (DIOSPYROS VIRGINIANA.) MICH.

Breckel in his "History of North Carolina," says that the inner bark has been used with success in intermittent fever. As far as our information extends, this interesting

statement remains to be verified. It is well known that its tonic and astringent powers have proved exceedingly valuable in the treatment of affections of the bowels,* hemorrhage and ulcerated sore throat†; there are many stages and complications of the different forms of malarial fever, where these tonic and astringent properties would fill most important indication; for malarial fever, as is almost always the case in China, is frequently accompanied with derangements of the bowels.

CATALPA. (BIGNONIA CATALPA.) LINN.

In a thesis supported at the Medical Department of the University of Pennsylvania, the bark of the Catalpa was maintained to be tonic, stimulant and more powerfully antiperiodic than the Peruvian bark. I have been unable, after careful research with the best authorities to find any facts which bear either upon the chemical constitution, or the tonic, stimulant and antiperiodic properties of the bark of the Catalpa. Physicians should exercise caution in their experiments with it, because it is generally believed to be poisonous. When the bark is wounded a very unpleasant, and according to the testimony of some, a poisonous gas is emitted; and it has been stated, on good authority, that honey collected from its flowers is poisonous, producing effects analogous, though less alarming, than those produced by the honey collected from the Yellow Jasmine of Carolina.

The seeds have been employed by several practitioners of continental Europe in asthma.

M. Automarchi recommends for this purpose a decoction made by boiling twelve ounces of water with three or four ounces of the seeds down to six ounces, the whole to be given morning and night.

* On the use of the unripe fruit of the Diospyros Virginiana, as a therapeutic agent. By John P. Mattauer, M. D., of Virginia. The American Journal of Med. Sci. October, 1842, p. 297. American Jour. Pharm. xii, p. 161. Woodhouse, Inaug. Diss.

† Dr. B. S. Barton's Collections. 11.

Medical Staff of the Army.

A Plea for the Medical Staff of our Army.

To the Editor of the Richmond Examiner:—

Having spent the past summer in and around Richmond, observing the progress of the mighty struggle going on between the North and the South, and occasionally visiting the encampments of our men from the seaboard up to the mountains, I often found much pleasure as well as instruction in reading the racy, spirited and able editorials of the Examiner. On returning home I missed the pleasure so much that I determined to become a subscriber to the paper, and did so. It happened that the first number that reached me (October the 1st) contained an editorial on the hygiene of camps and the prevailing sickness in our armies, displaying so great a lack of correct information in regard to the subjects treated of, and withal, such unjust and unkind reflection on the Medical Staff, that I felt strongly inclined to seize my pen at once and attempt to defend my unappreciated and much-abused profession; but my attention became otherwise engaged, and I had almost ceased to think of it, when your number of the 18th came to hand. This impelled me to offer you a communication, feeling confident that the bold and patriotic spirit which prompts you to expose and denounce error and abuses wherever found, will, at the same time, induce you to cheerfully receive admonition in regard to any error you may fall into yourself. I shall review your papers as they come out, and if I should find occasion to expatiate, and even indulge in some apparently harsh expressions, I trust that neither you nor any others who may be alluded to will impugn my motive and object. Thank God, liberty of

speech, and of the pen, has not yet been wrenched from us in the South by the hand of tyranny, and I claim the right of a private citizen to express his opinion freely, but respectfully, of the acts of all public officers, from the highest to the lowest.

You open your first paper with the remark—"the hygiene of the camps is the most difficult problem of the war"—an assertion which I shall not deny, though it would certainly appear to be no means *unquestionable*, judging from the small amount of attention devoted to it by our Government. You go on to say, "innumerable essays have appeared in the newspapers on the subject—receipts and admonition, and advice have been thrown before the public and thrust upon the soldier—these have all had abundant time to be heeded and practiced upon; still the sickness goes on." I can only express surprise that a sensible man would expect much benefit to result from the greater part of the articles alluded to, in the newspapers of the day. That is not the best place to look for either sound medical knowledge or wholesome medical advice.

Admitting, as you do, that we certainly have a great deal of sickness in the camps—more than the Yankees have in theirs—you say, "the inquiry is, what is the reason of this frightful prevalence of sickness in our camps?" In your effort to answer this important question you say "it will not do to ascribe it to the tents; nor to filthiness or want of cleanliness in the camps; nor to the soldiers' diet ('fried dough,' for instance,) nor to the use of fresh or salt meat exclusively;" because all these supposed causes are sometimes found to exist, but without attendant sickness. You then bring yourself to the following sage conclusion—"The sickness would therefore seem to be owing to one of two causes, probably to both; either to the fact that the medical staff of the army is deficient in professional science and skill, or to another fact which will be stated in the sequel."

That "other fact" must be *measles*, as there is nothing

else mentioned as a cause of sickness in the sequel. We are certainly indebted to the able editor of the Examiner for thus simplifying "the most difficult problem of the war," and tracing the greatest evil under which we have labored to one or both of only two causes—*medical incompetency and the measles*—both of which are easily comprehended, and fortunately, to a considerable extent, within reach of correction. Let us now examine the demonstration of the learned ætiologist. You commence by saying, "It is but little creditable to the medical staff of the army that so little certainty exists as to the cause of the extraordinary sickness—that disease may very often be beyond the reach of medical science; but if the faculty are incapable of ascertaining the causes and devising the preventives of it, we should think that there would be little hope of their successful treatment of disease after its development." You would thus hold the profession responsible for the evil on account of its culpable ignorance of the cause. Now I would respectfully ask whether you are perfectly sure that "so little certainty" does actually exist on the point in question? I confess I had been under the impression that the most common cause of army disease had been pretty well ascertained, and that the preventive measures which have been devised by able and experienced army surgeons, when properly attended to by Governments and enforced by commanding officers, had been productive of most beneficial results. The history of modern warfare certainly sustains the correctness of this impression; yet it seems not to be appreciated by many Governments, and among them ours in particular.

I am sorry to perceive that our young Confederacy has inherited this defect from the old Union, as that did from the mother country; which, although perhaps the most enlightened and powerful Government in the world, was always far behind its spirited rival across the channel in its provision for securing the health and comfort of its armies in the field. The contrast between England and France

in this respect was prominently displayed in the late Crimean war, when they were fighting side by side against a common foe. The great Napoleon was fully aware of the importance of this point. He made his surgeons investigate the causes of disease in armies, and enforced the preventive measures devised by them. He found his reward in the preservation and gratitude of his soldiers. His noble example is strictly followed by his illustrious successor at the present day, who, when he sets his armies in motion, provides them with everything that is necessary for their health and comfort, and enforces every measure that has been found useful as a preventive of disease.

Think you that all this is unknown to the medical staff of our army?

If you do, you are very much mistaken. But what would be the use of this valuable knowledge of the causes and prevention of sickness, if our Government attach no importance to it, nor makes any provision for rendering it available? If any one has visited the different divisions of our army, as I have done, and inquired particularly into the provision made by the War Department for the injuries and sickness usually incident to war, methinks he cannot have avoided the conclusion that our Government must consider its soldiers alike *invulnerable and incapable of getting sick.* I am alluding now to the provisions of medical and surgical materials, and not to the qalifications of the Medical Staff. You, Mr. Editor, seem bent on fixing the evil complained of on this body. You acknowledge the indebtedness of the whole human family to medical science "for the almost total extinction of small pox," which is true; and "for the suppression of cholera and the discovery of many specifics for its treatment," which, unfortunately, is not true. You confess obligation for "our security from many afflicting and decimating scourges to the skill, genius, searching investigation and eminent learning of the Faculty of generations preceding that to whom, now, the health and lives of our community and

families are trusted;" but you add, "whatever panegyrics may be pronounced upon the science itself, or eulogies be employed in honor of eminent men of the profession, not now in practice, there is reason to fear that the medical staff intrusted with the hygiene of our armies are at fault, either as to their qualifications or their attention to duty." * * * "The extent of sickness is so great as to cry aloud for reform—for the vigerous use of the knife of reform—if, indeed it be owing to the remissness or incompeteney of the surgeons entrusted with the health of the volunteers."

Now, sir, I will not undertake to be apologist for the *entire* medical staff, or to assert that it is perfectly free from individual instances of remissness or incompetency. That, perhaps, could not be said for any department of the Government, from the highest to the lowest; but justice demands that some one should volunteer to defend this body of brave, patriotic and intelligent men against untrue, unkind and unfounded accusations. Since you have made use of a professional metaphor—"*the knife of reform*"—allow me to remind you of another instrument which surgeons often have occasion to use before applying the knife, and that is the *probe*.

By way of continuing your metaphor I would suggest that you *probe* down to the very bottom of the evil and ascertain its seat, extent and bearings, before you apply the *knife* in your operation to reform. Probe, thoroughly, the medical staff, and if you find in it examples of incompeteney or inattention to duty, let them be exposed and condemned. Probe the military officers, to know whether they carry out the sound, sanitary measures recommended by the surgeons. Probe the commissary and quartermaster's departments to ascertain whether sufficient hospital accommodations and supplies, and suitable food are furnished for the sick. Probe the action of the Surgeon General, to find out whether he promptly fills the requisitions of the surgeons in the field. Probe the War Department, to see

whether the Secretary has provided all the officers under him with every thing necessary for the relief, protection and comfort of the sick and wounded men. Probe the action of Congress, to know whether the representatives of the people have made sufficient appropriations to carry out these purposes. And lastly, probe the official conduct of our beloved President, the Commander-in-Chief of the Army and Navy, and honored with the highest office in the gift of the people, to see whether he duly appreciates the importance of the medical department of the Army and Navy in time of war, and provides accordingly; whether he takes the necessary steps to engage the services of the most competent men for his medical staff, and has them armed and equipped as the law directs. Such men are to be found, and should be sought for, instead of expecting them to bow at the footstool of power and beg for this laborious and hazardous and responsible position. The President calls for volunteers to defend the country, and thousands rush to his standard, relinquishing the comforts of home and all their private interests. They expect to labor, to endure hardships and to march up to the cannon's mouth, if necessary; but they likewise expect, and have a right to expect to be well fed, well clothed and skillfully treated if they get sick or wounded. And I have no hesitation in saying that the head of the Government should be held to a considerable extent accountable for the failure of these reasonable expectations. It certainly would not be more unreasonable to expect soldiers to gain victories without arms, than army surgeons to cure camp diseases and perform operations without medicines and instruments. Sir, if you had visited the encampments in Virginia, and examined the equipments furnished by Government to the Medical Staff, you would have doubtless been better informed as to where the responsibility rests for the sickness and suffering of our armies, and been more charitable and just in your comments on the action of the medical corps in the field. You might have traced it *in part* to the Surgeon

General, who sits at his bureau in Richmond, and never goes into the field to see for himself the real state of things. From him you might have traced it in part to the Secretary of War; from him to Congress; and from Congress to the Department of State; Where in my humble opinion, most respectfully expressed, lies the *fons et origo mali.* The greatest monarch of the day, Napoleon III, who is the embodiment of the State deems it his duty to order every possible provision for the care and protection of his soldiers. Who would dare assert that the noble army of patriotic citizen-soldiers who have placed themselves under command of the President of this glorious Confederacy are not equally worthy of his special care and attention? Of all the departments named, I am satisfied that Congress is less to blame for the evil complained of than any other. That body has voted liberal appropriations for the care of the sick and wounded, and it devolves on the Executive and War Departments to have them properly applied.

I trust, Mr. Editor, I have said enough to show your error in respect to the *first* of the *causes* to which you think the sickness of the army may be due, viz: *the incompetency of the medical staff;* and, furthermore, that if any blame is to be attached to the medical staff, the fault lies not in the incapability of the medical profession to "meet the exigencies of the times," but in the "appointing power," by which doubtless many incompetent and unqualified men have been intrusted with the medical care of our soldiers. But here let us do "the appointing power" the justice to say, the fault does not lie altogether there. It is well known that volunteers claim the privilege of choosing their own medical officers, and on their recommendation the President generally appoints. If they select "incompetent, unqualified and unworthy men" for this important position, they should blame no one but themselves, and deserve to suffer the consequences.

Now let us turn our attention to that "other fact" which you cite as one of the chief *causes* of sickness in our armies

—it is the *measles*. "The measles is the beginning of the evil." "In nine cases out of ten the disease commences with the measles; then comes the relapse, with its protracted fevers, pneumonia, diarrhea, dysentery, &c., either ending in death, or leaving the patient an emaciated skeleton, prostrated in mind, body and spirits."

Without criticising your citation of a *disease* as being the principal *cause* of disease in the army, I must commend your graphic description of the ordinary course of events. But you do not tell us how to avoid this potent cause, or how to get clear of it when it exists. You only suggest, in accordance with an extreme opinion which you happen to find in a newspaper, that soldiers with the measles should be kept in hospital or camp from four to six weeks after they have apparently recovered from the disease. It cannot be denied that they are often turned out too soon, and sometimes have to march, exposed to bad weather, while the disease is still upon them; but if you had seen the miserable accommodation provided by Government, for the sufferers under this sometimes dangerous complaint, you would have found other shoulders than those of the Medical Staff on which to lay the blame. I have known regiments of our noble volunteers sent to the field unprovided by Government with hospital tents, hospital supplies, medicines, or surgical instruments—indeed, with no other medicines and instrument than such as the surgeons themselves had supplied. I have seen old vacant houses appropriated to hospital purposes, and their naked floors crowded with cases of measles and diarrhea, without even a cup to drink from, a basin to spit in, or a certain other nameless vessel, so essential in the sick-room. Under these circumstances, what was called "the *hospital*," instead of being a desirable asylum, was the terror of the sick soldier, and he had to be forced into it. Now, sir, would you blame the Medical Staff for all this? It is well known that measles, when properly attended to, is not often a dangerous disease; but can soldiers in the field be properly attended to unless Government provides the means?

Everybody has felt disposed to make all possible allowance for the shortcomings of our young Government, so recently formed and so suddenly plunged into a terrible war, and the extreme difficulty that has existed in procuring the necessary supplies of medicines and instruments. All classes of people, old and young, rich and poor, male and female, have come to the rescue with unexampled energy, liberality and devotion. The people in every walk of private life have nobly done their duty in this national contest, and the officers of Government, from the highest to the lowest, are expected to do theirs; but if there be any blame for dereliction or disaster, let it rest upon the proper shoulders. I boldly assert that no profession or calling has displayed more patriotic devotion or self-sacrificing zeal in this glorious war than that to which I have the honor to belong. A single instance out of many shall alone serve to support my assertion. I visited the field of Manassas a short time after the great battle, and there I found a professional friend from Mississippi, at one of the farm houses at Bull Run, which had been turned into a hospital and filled with the wounded and sick of both armies. I asked him to what regiment he belonged? He said he belonged to none, but that, as an independent volunteer surgeon, he had been allowed to accompany the one from Mississippi, which contained the largest number of his neighbors and acquaintances; bearing his own expenses. Knowing him to be an excellent physician and surgeon, and finding him doing good service in the field, on my return to Richmond I brought him to the notice of the Surgeon General, who at once put his name on the list of applicants for the post of surgeon. Before learning the result, after the lapse of a week or two, my friend came down to the city to purchase some articles which he needed, and I told him what I had done in his behalf. He thanked me kindly, but positively declined accepting an appointment if it should be offered. He said it would only serve to cramp and confine him to a limited sphere, whereas, if

he were independent, he could go wherever his services were most needed; that he wanted no pay from the Government, and only wished the privilege of serving in the way he thought he could do the most good. I saw a gentleman offer him a horse. He gratefully refused; saying he had already accepted one from a lady, and could not afford to keep two. And thus this patriotic physician remains with his fellow-citizens in the tented field, abandoning a lucrative private practice at home. Perhaps you would like to know his name. I shall not give it, because I know it would offend him; but I may be permitted to say he is a native of the glorious Old Dominion.

But let us return to the measles, which you consider as "the obvious and tangible cause of the extraordinary amount of sickness in our camps." Viewed as the beginning of a long train of terrible *sequelæ*, or ills which too often follow, as it is managed in the army, you are correct in your position. But whence comes the measles in camps? Is there no way of stopping its progress and checking its ravages? I have no doubt that if these questions had been thoroughly investigated and the suggestions of the medical staff carried out, most salutary results might have been obtained; but if anything of the kind was undertaken or even thought of by the head of the Government, it never came to my knowledge. The truth is, our Government underrates entirely the importance of the medical branch of its War Department—appearing to deem it only necessary to provide the means for conquering and destroying its enemies, regardless of the health and protection of its own brave soldiers! It confers *no rank* on its medical officers, but holds them altogether subordinate to its military commanders; thus depriving them of the most powerful incentive to energetic action, and plainly showing that it sets a far higher value on its powers of destruction than on its means of self-preservation. The military hero may lead his soldiers to victory, but can he likewise staunch their bleeding wounds, amputate their gangrened limbs and restore their

mutilated bodies; or check the ravages of the pestilence in his camps? Does the Commander-in-Chief know that about fifteen soldiers are lost from camp disease to one that is killed in battle? If he does, he ought to see the importance of having an able medical staff, composed of men who are not only skilled in operative surgery, but likewise in the practice of medicine. Such men generally find lucrative employment in private life; and when you find them volunteering to act as surgeons—a position of danger and hardship, unaccompanied with rank and unappreciated by Government, you may rest assured that a *higher motive* actuates them than the miserable pittance of the army surgeon's pay. Those who really need this are generally the most eager to get the place and least qualified to fill it. From some cause or other, the Old Government, as well as the new, has opposed the conferring of rank on the medical staff of the Army and Navy, and I regret to learn that our distinguished President has been generally considered one of its leading opponents. With due deference, I must be allowed to express the opinion that it is a *very grave error;* and I trust the experiences of the present war will lead to its speedy correction. Under existing circumstances, what do we behold? The army so weakened by disease and so badly provided with hospitals, medical supplies and competent medical attendance, that the people have had to come to the rescue and furnish nearly every thing that was wanted. As I before stated, we are willing to make all due allowance for the shortcomings and difficulties of our new Government; but if there is any blame to be pronounced, let it fall in the right place.

So much, Mr. Editor for your first article. Having gone over so much ground in this, I shall be brief with the second, although it is much the most objectionable of the two.

You commence your second editorial (October 18th) with the remark—"We are satisfied, and have been for some time, that if there be a branch of the Government which needs overhauling, it is the medical department of the

army." In this I fully concur. You go on to say, "The sickness in the various camps has existed from the latter part of May to the present time. The men went into the army in good health, well provided with tents, with elastic spirits, and they have been usually located in healthy neighborhoods. * * The fact that this sickness should have thus gone on increasing from day to day, and that no preventives have been yet found, is an everlasting reproach to the medical authorities of the day." I beg to refer you to what I have said in defence of the medical staff against this unjust and unfounded charge. "At the outset, their attention should have been turned to the causes of this mischief, and the proper preventive applied." Whose duty was it to turn attention to the matter, to inquire for preventive measures and have them executed? "Their powers are of the amplest character." Either you or I must be sadly at fault on this point, for according to my understanding, the medical staff has only the most limited powers, and occupies altogether a subordinate position. You say, "We happen to know that they had every aid from the Generals and associated officers in command."

Now I happen to know, from personal observation, that they received very little aid either from the officers in command or the head of the medical department in Richmond. I made it my business to inquire particularly into the matter, both at Yorktown and Winchester—made notes of the deplorable deficiencies in everything requisite for the care and treatment of sick soldiers, and laid them before the *then* Surgeon General. I showed them to Maj. Gen. Polk, who said they ought to be seen by the President and Secretary of War, and took them from me for that purpose, but I know not whether it was done. This I know—that more than a month afterwards I met with a medical inspector on his return from Yorktown, where he had been sent to examine into the condition of the sick; and from what he told me, it was fully as bad, if not worse in every respect, than when I was there. For instance—

he said there were perhaps a thousand cases of intermittent fever at one place, and not half an ounce of quinine in the hands of the surgeons. Requisition on requsition had been sent up to Richmond, but not received. Call you this "abundant aid" to the medical officers? What would you say of the Government if it knew of a division of its army, located within six hours travel from the capital, which was badly supplied with comforts and almost destitute of arms, but actually engaged with the Yankees, who had already wounded a thousand men, killed a few, and would probably destroy or take the whole unless they should make their escape? *Perhaps* you would denounce the proceeding! But in the instance before us a similar case is presented. A gallant division is closely beleagured by an invisible foe, which had wounded upwards of a thousand of our men and killed more than the Yankees did in the battle of Great Bethel; yet unprovided with means of defense. And what do we hear from you? A bitter denunciation of the *special officers* in command, for allowing the enemy to steal a march on them, and not conquering him without weapons.

You go on to say, "In any instances in which they (the surgeons) have failed because the requisite help was not extended to them by other departments of the army, they should have appealed to the proper authorities here, and if this appeal (contrary to our firm belief) had proved ineffectual, they should have thrown up their commissions rather than appear as the heartless and indifferent spectators of the sufferings of our troops."

In this paragraph you show your *prejudice* against the Medical Staff, and recommend a course not likely to be adopted by the honorable, benevolent and patriotic members of the profession, who deem it their duty to stand by their men in all difficulties and dangers, and to share their fate.

You say, "All the accounts which have come to us have made a most unfavorable impression as to the care of the

sick by the surgeons," and then cite an instance where some four or five hundred sick men reached Manassas late in the day, on their way to richmond; the rain was pouring down, and no provision whatever had been made for their reception; they were forced out of the cars, and left to seek shelter as best they could. Some few managed to get into the hospitals—the rest had to lie down in the rain, with no covering but the leaves of the trees and their blankets. These soldiers were allowed to pursue their journey in the cars to Richmond without food of any kind, and were dependent on the charity of private individuals for relief from the cravings of hunger. "On reaching the city a similar neglect prevailed, and men with frames so weak that they could hardly stand up, were allowed to wander helplessly in the streets, without direction or guidance." This is a horrible picture, but, I have no doubt, a true one. You then ask, "What possible excuse can there be for such wretched mismanagement? What brutality of the Yankees to our prisoners can exceed this infamous wrong and outrage upon the men who are willing to lay down their lives for their country?" I beg leave to say in reply, I can think of nothing comparable to "this infamous wrong and outrage," except the *heartless injustice* with which you attempt to saddle the entire blame on the army surgeons! You ought to know, sir, that it is not the sole duty of the surgeons to provide either suitable transportation or comfortable entertainment for sick soldiers; and I am pained to see an able and distinguished editor making studied and persevering efforts to shift the blame of this crying evil off the shoulders that should bear it.

Can it be possible that you are afraid to make your attack in the quarter where it really lies; If so, I pity the hard fate of our brave volunteers.

You say "you are persuaded that the able and energetic man at the head of the War Department will find, on giving his attention to the subject, that abuses exist which

call loudly for reform, and you do not believe that he will permit such things to continue."

I can only say that if he does not, he will do much better than his predecessor, and will merit the gratitude both of the army in the field and their friends at home.

I beg to say, in conclusion, that the strictures I have made on the official conduct of the heads of the War and Medical Departments refer mainly to occurrences which took place before the present worthy incumbents came into office. And likewise, those on the Executive refer to the defects of the department, and are made with a profound respect for the distinguished individual to whom we have entrusted "*the appointing power.*" I am fully aware of the very great difficulties the Government in its isolated condition has had to encounter in procuring supplies of medicines and surgical instruments. But when I see the able editor of an influential paper undertaking to investigate the causes of the distressing sickness that has afflicted our armies, and unjustly laying all the blame on the medical staff, I consider it my privilege to offer an humble effort in its defense. Justice demands it, and I trust the urbanity and liberality of the Examiner will allow it a place in its columns.

Very respectfully, E. D. FENNER, M. D.

New Orleans, Nov. 15, 1861.

P. S.—It was intended to send this paper to the Examiner direct, but the writer having no personal acquaintance with the editor, could not feel certain of its acceptance. He has therefore concluded to accept the kind offer of the editors of the Delta to publish it in their widely circulated paper; and through this channel he most respectfully submits it to the editor of the Examiner, with the request that he will give it a place. The writer sincerely trusts that the able editor of that paper will properly appreciate the motive that actuates him. E. D. F.

Editorial.

Our Army Surgeons.

We have received from that estimable and cultivated gentleman, Professor E. D. Fenner, of New Orleans, a well written and from the character of the author, no doubt truthful article, entitled "A Plea for the Medical Staff of our Army."

We transfer this merited defence of our Army Surgeons to the pages of the North Carolina Medical Journal, in the hope that our readers will carefully peruse it and deliberately consider its contents. It is full time that the people of our country understood this question, so that the entire weight of responsibility may fall on the right ones. No matter how high their position, let them be held to a strict accountability for their short comings and shameful neglect of this important arm of the public service.

Subscribers.

This number of the Journal closes the volume for this year, and we are sorry to be compelled to make our bow to the friends—did we say *friends?* we should have said *readers*, of the Journal, and to inform them that the *North Carolina Medical Journal will be discontinued for want of support.* The circular found below, which has been sent to all delinquent subscribers, and to which Four Gentlemen

have responded, will explain the *pressing necessity* which impels us to take this step. The enterprise is full three hundred dollars behind for this year, and by any fair means of computation *we can resort to*, and depend upon it, good reader, we have *worked it by every rule of arithmetic we know* it will be six hundred dollars more in debt next year. That will make the entire indebtness of the Journal this time next year *nine hundred dollars;* and that indebtedness will be to us, for the *publishers must be paid.*

In taking leave of our readers, we wish to inform them, that we feel in every way responsible for the character of the Journal for this year, save in one single particular. We must not be held to any accountability for the character of the controversial pieces which have occupied so much space in each issue of the Journal for this year, excepting the July number—These have been published in the form they have been sent to us, without regard to our individual opinion of them, in a professional, literary or other points of view, because we have really felt instructed by the society so to do. If we have misapprehended the purpose of the Society, there are many reasons why we should regret it. But, in point of fact, such has been our honest conviction of duty as the representative of the Society, and we have acted accordingly.

(CIRCULAR.)

Dear Sir:—You owe me *Three Dollars* for your subscription to the North Carolina Medical Journal for the year 1861.

The whole labor and expense of editing and publishing this Journal for this year, has fallen upon me, and I have expended full *Three Hundred Dollars* more upon it than has been paid to me by subscribers and the Medical Society of the State.

I am still, as I have been all the while, perfectly willing to give my time and labor to this work, for the sake of the medical profession of my State, and of the South; but I cannot consent in these troublous times to spend any more money upon it. If, therefore, I am not reimbursed for what the Journal has already cost me in actual money, it must, in justice to myself be discontinued.

It would not be proper for me to say anything in regard to the character of the North Carolina Medical Journal, so far as my connection with it is concerned; nor of the immediate value of this work to the Medical profession of this State particularly, especially under existing circumstances of non-intercourse with the United States and Europe, for of this, as of all my work, I desire that it shall be judged by its merits.

Very respectfully,

CHAS. E. JOHNSON.

Errata in Dr. Manson's Article in the Sept. No.

Page 435, on 8th line from top, for Laennec Avenbrugger," read "Laennec *and* Avenbrugger," and omit "*and*" after Avenbrugger.

Page 439, in foot note, for "*carniverous omniverous*," read "*carniverous* AND *omniverous*," and in the same note for "*chloepyrrhim*" read "chole. pyrrhin."

Page 440, on the fourth line from bottom for "Pneumoniavec Hepatite, op eè," read "Pneumonie avec Hepatite op. et."

On same page on 2nd line from bottom, for "Hepatites," read "Hepatitis."

On page 445, on 17th line from bottom, for "erasion," read "erosion,"

On page 445, on 12th line from bottom, for "Taracelsus,," read "Paracelsus."

On page 446, 12th line from top, for Borden read Bordeu.

On page 446, 12th line from top for Bichot, read Bichat.

On page 446, 24th line from top, for Hematologee, read Hematologie.

On page 446, 25th line from top, for nosohemics, read nosohemics.

On page 446 34th line from top, for diopedesis, read diapedesis.

On page 450, 3rd line from bottom, for Cowrs, read Cours.

RATES OF ADVERTISING.

Advertisements will be inserted in the *North Carolina Medical Journal* at the following rates:

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Half page	"	4;	"	8;	"	15
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The improvements which were commenced last year, under the liberal appropriation made by the State Legislature, have been for the most part completed. The College building has been to a great degree renovated: Extensive additions have been made, at large expense, to the Chemical Apparatus, the Anatomical Museum, and the illustrations in every department: The new Hospital has been completed and furnished, and has been for some time in successful operation. The facilities for the prosecution of Practical Anatomy will be, as heretofore, ample.

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L. S. JOYNES, M. D., *Dean of Faculty.*

Richmond, August 1, 1361.